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Drug Markets

July 1931

The Magazine of the Manufacturing Drug Trade

THE JOHN CRERAR
JUL 27 1931
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SUN TUBES HELPED MAKE IPANA'S BRILLIANT RECORD

SKYROCKETING to a 300% increase in six years, Ipana sales have made a sensational record.

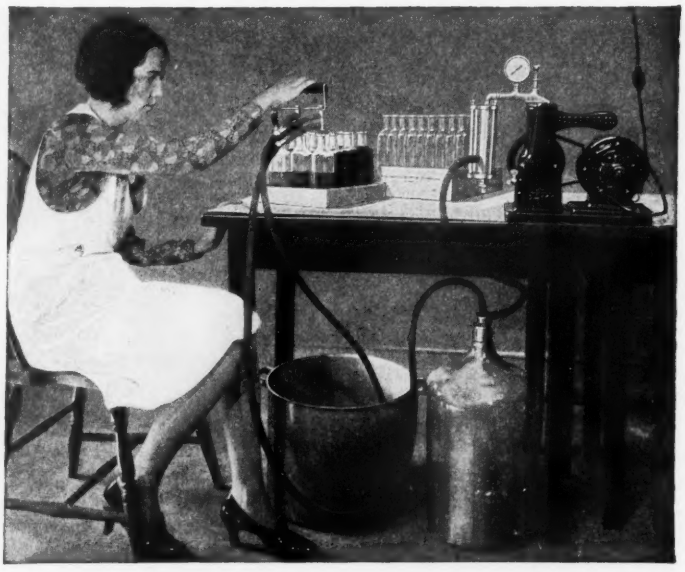
The makers of Ipana knew they had a good product and they packed it right. They came to Sun with their problem. For you can depend on a Sun tube! It's absolutely reliable—worthy of your product. *And the Sun way costs no more!* Sun will make for you a *dependable* tube that will help win—and keep—good customers!

. . . SUN TUBE CORPORATION . . .
HILLSIDE, NEW JERSEY

FOR MODERN LIQUID PROCESSING

Hy-Speed VACUUM BOTTLE FILLER

FEATURES: Fills all size bottles to exact predetermined level . . . Rejects imperfect bottles . . . Portable ...Operates from light-socket ...No installation expense... Cleans quickly, automatically . . . Simple to operate.

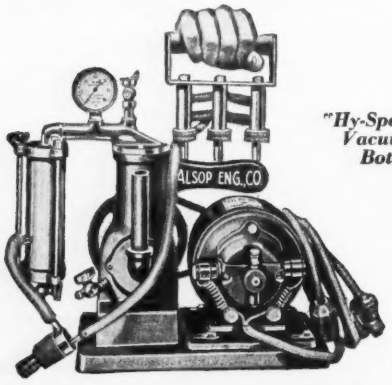


The simplicity of this machine is apparent at a glance. Liquids do not touch any valves, floats, or moving parts.

THIS modern method of filling bottles was first introduced to the bottling trade by the Portable "Hy-Speed" Vacuum Electric Bottle Filler.

Its immediate adoption by leading drug and perfume manufacturers revolutionized industrial filling methods. For the first time it made possible the use of efficient, cost-reducing equipment for filling relatively small orders of many different products.

The "Hy-Speed" Bottle Filler is ready to operate in five seconds . . . is adjusted to bottles of any size in 30 seconds . . . it cleans itself for use with different liquids in 60 seconds. This performance is of definite value in any plant, and is an absolute necessity where many different items are produced, and the batches must be filled as processing is completed.



"Hy-Speed" Portable Vacuum Electric Bottle - Filler

The approximate filling speed is 600 quart, 1000 pint, 1500 half-pint, and 3000 ounce bottles per hour. This depends to some extent on the liquid used and the speed of the operator.

REJECTS IMPERFECT BOTTLES

Imperfect bottles with the slightest pinhole or crack are rejected instantly. This valuable feature prevents waste of liquid and imperfect shipments.

Some concerns use one "Hy-Speed" machine to turn out daily orders for over thirty-five different products . . . others have found that the largest output can be handled more economically under perfect control when a number of these machines are used.

Concentration on one model which has proved satisfactory in hundreds of plants makes possible a first cost that is unusually low. There is practically no upkeep cost.

Approximately 1000 of these machines are in daily operation all over the world.

In ordering be sure to give type of electricity.

ALSOP ENGINEERING CO.

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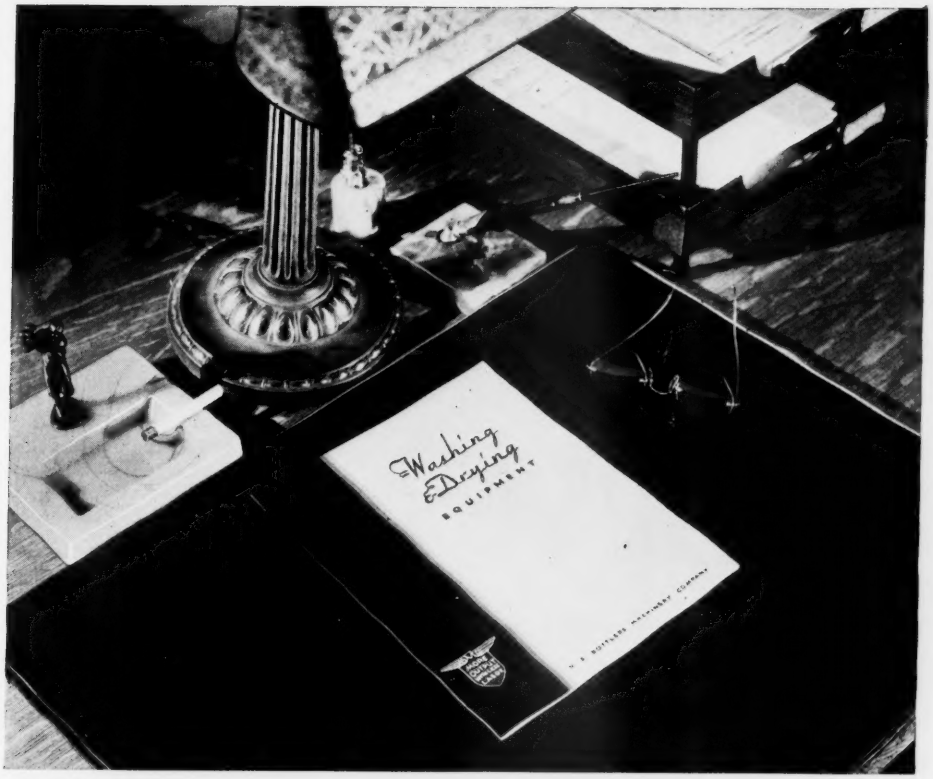

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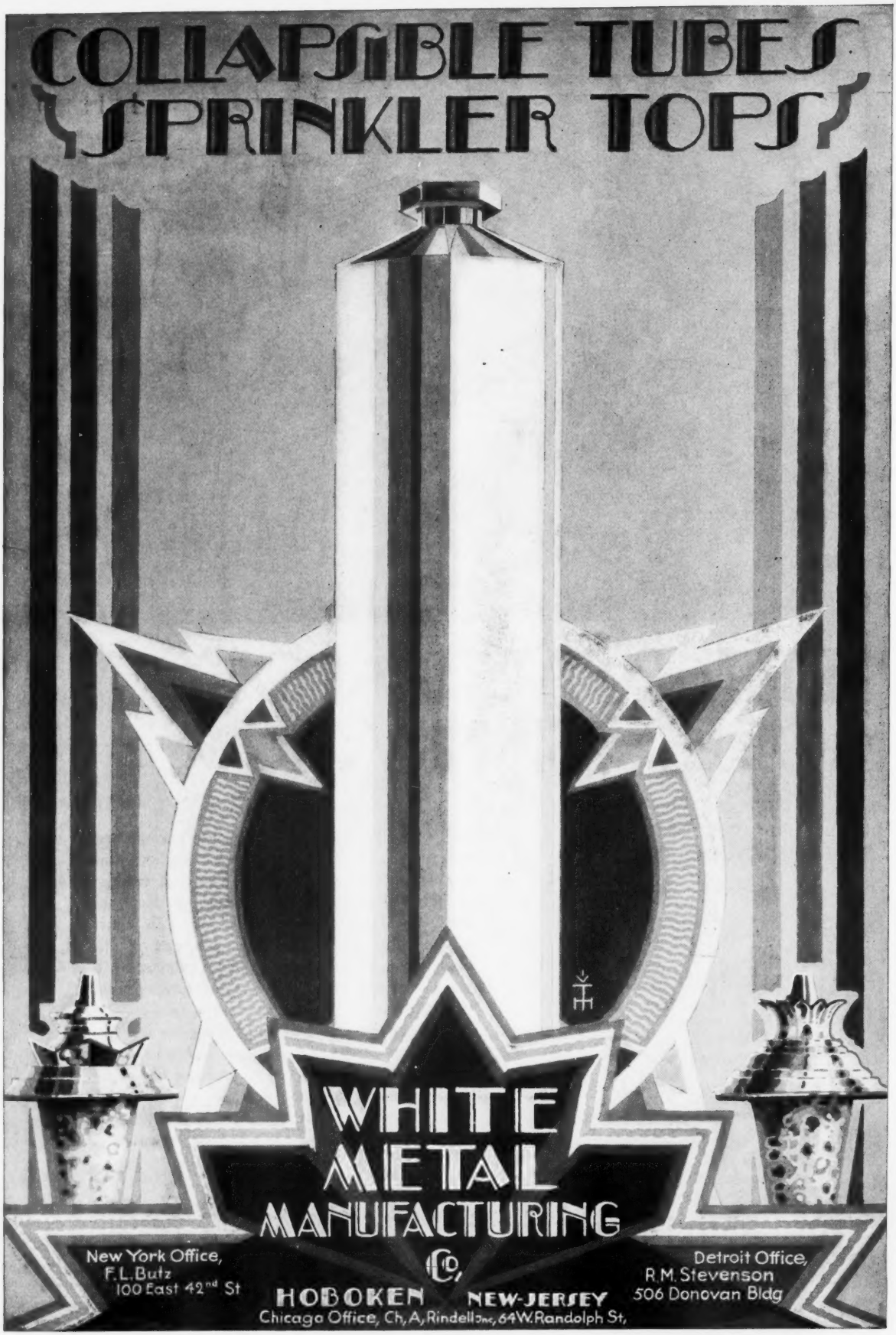
Do you know that no more operators are required to wash, dry, and sterilize bottles, jars, and cans than are necessary in plants where such modern sanitation is neglected? No matter whether your plant is a large one or a small one; no matter whether your washing problem is simple or difficult, U. S. Washing and Drying Equipment will handle the situation efficiently and economically. U. S. Engineers have brought out a new bulletin on the subject of washing and drying, the first section of an entirely new catalog. The information it contains is clear and concise and the book is a valuable source of information for the executive concerned with production. A request written on your letterhead will bring you a copy immediately.

U.S. BOTTLERS MACHINERY CO. INC.

Bottling and Packaging Engineers

4015-31 No. Rockwell St. · · · · Chicago, Ill.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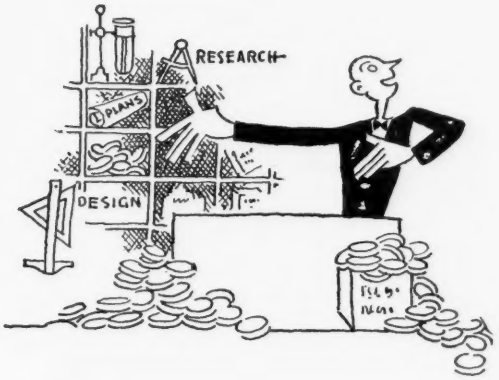

for COMPLETE CLOSURE SERVICE

"COMPLETE"... a big word, and a big claim to make. But of real importance to the user or prospective user of glass containers.

• If we were merely selling caps we would not need our elaborate research laboratory to make special tests for those interested in determining how a particular product can best be packed and sealed. We wouldn't need an art department to provide service in designing containers, labels and lithograph of caps. We wouldn't even need fifteen different types of caps, ensuring every customer just the right one for his particular product, package, or pocketbook.

• Maybe there are other things we could dispense with if we did not care about making our service *complete*, but...

Another World Famous Brand Goes Anchor Amerseal

• Since we *do* maintain complete service why not take advantage of it? Put up to Anchor any question you may have, or problem that is troubling you, or the idea you may be considering. It doesn't have to be about closures necessarily. Anything relating to packaging in glass containers.

• Our vast experience has covered all phases of the glass container field—for over a quarter century.

• Specific requests for information will receive careful and immediate attention. Or, if you prefer, just leave it up to us—send us one of your present packages, and let us make recommendations for their improvement.

Anchor Cap & Closure Corporation
Long Island City, N. Y. Toronto, Canada
Branches in all Principal Cities

Anchor CONSUMER-APPROVED CLOSURES for every Packing Need

LET US COLLECT

YOUR BAD OUTSTANDING ACCOUNTS

WE ARE REPRESENTED THROUGHOUT THE WORLD

No Charge Unless Successful

Call or Write

INDUSTRIAL CREDIT ASSOCIATION

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Containers which fill all requirements . .

Bottles and glass containers made by Owens-Illinois fill the packaging requirements of an almost endless variety of products. Our wide experience in every field in which glass containers are used qualifies us to suggest methods by which Owens-Illinois glass containers can help the sale of *your* product. Illustrated below are a few of the notable new containers produced by us this year. Owens-Illinois Glass Company, Toledo, Ohio.

OWENS-ILLINOIS

BOTTLES *and* GLASS CONTAINERS

MOST PEOPLE think of advertising in terms of large display space in National magazines and newspapers . . . twelve sheet posters and bulletin boards . . . four-color process broadsides and mailing pieces.

But advertising is not entirely copy, layout or media. It is something more than all of this.

Advertising is the quality of your product . . . the style and convenience of your package . . . the type of salesmen you employ . . . the letters you write . . . the friendly voice of your telephone girl . . . the promptness of your credit man . . . yes, and even the fairness of your own purchasing agent.

All of these things are advertising in that they form opinions. And these opinions invariably are stronger and more lasting than those formed by printed words and pictures, regardless of how they are handled or where used.

In analyzing the advertisements which greet you from every side you will find many which seem to have been designed merely to cloak the inferiority of a product or the inefficiency of an organization. But they are seldom more than a poor disguise. Obviously, anybody can claim anything (in their advertising), but that does not make it so.

Don't mistake my attitude. I do not mean to convey the thought that all advertising is "the bunk," or that it is not necessary to advertise if you make an excellent product and everything is *right* with your organization. If such is the case—all the more reason for telling everybody about it.

The point I really wish to make is that advertising is not so much the use of clever phrases and beautiful illustrations as it is the whole tone of your organization. It's not the uniform you wear on dress parade, but your everyday working clothes.

That's what I call advertising!

Dart Smith

THE PUBLICITY of the PHOENIX-HERMETIC COMPANY, with of course the occasional exception, has been restricted to full pages in a few selected trade publications (of which this advertisement is an example) and a small house publication, *The* PHOENIX FLAME.

In the preparation of this material it is probable that some of the fetishes of the advertising profession have been violated many times. But we have tried to give you a faithful picture of our product and our organization, and we have talked to you direct rather than through the consumer, the retailer, or the wholesaler.

Back of all of our advertising there is first the desire to produce as fine a product as it is commercially practical to manufacture. Then, to serve those who buy from us to the limit of our ability.

With this object in mind we have gathered about us as able a group of men as there is available to a business such as ours. And we have equipped our plants with efficient labor-saving equipment so that it would be easy for them to do good work.

Our working hours and methods of remuneration are designed to keep these men happy and content at their jobs. All of which, we believe, has been attended with more than ordinary success.

We tell you this not in the spirit of the confirmed braggart or blind idealist, but because we sincerely believe our best advertisements will be found in the quality of our product and in the service which we render our customers. If you are a user of our product you know about this. If not, we can only ask your permission to prove it.

PHOENIX-HERMETIC COMPANY
Metal Caps for Glass Packages
CHICAGO NEW YORK

Offices: New York, Philadelphia, Boston, Chicago, San Francisco, Los Angeles, Cleveland, Cincinnati, St. Louis
Plants: 2444 W. 16th St., Chicago; 14th Ave. and 38th St., Brooklyn

PHOENIX *Metal Caps*

Capitol Cap

THE SELLING POWER OF COLOR AND DESIGN

We have made notable contributions to the art of tube decoration, and can approach your problem with the advantage that comes from long experience, intelligent understanding and demonstrated ability to produce the outstanding.

Constructive suggestions are yours for the asking. Perhaps you have a problem right now on which we can help.

NEW ENGLAND COLLAPSIBLE TUBE COMPANY

17-35 Waller St., New London, Conn.
3132-34 S. Canal St., Chicago, Ill.
New York Office: 370 Lexington Ave., (Cor. 41st St.)

NEW ENGLAND COLLAPSIBLE TUBES

Ideals

An ideal is the thing that keeps a manufacturer moving in the right direction---toward perfection. In 1867 Mallinckrodt set up in its one 40x80 building, an ideal. This ideal was to manufacture, as perfectly as possible, a line of fine chemicals. Striving brought a degree of accomplishment which has been reflected in three plants covering many acres, producing more than 1500 industrial and pharmaceutical chemicals.

Six conveniently located offices will welcome a discussion of your chemical needs. Communicate with the one nearest you and ask for a complete catalogue.

Mallinckrodt Chemical Works

St. Louis
Philadelphia
New York
Chicago
Toronto
Montreal

Mallinckrodt

FINE CHEMICALS

Drug Markets

Vol. XXIX JULY 1931 No. 1

Drugs in the Depression

SAGGING sales and profit curves, idle equipment, discouraged salesmen, and many other factors attendant upon times of depression quickly bring gray hairs to the directing heads of our business enterprises. Ways and means of overcoming these conditions are more readily available to drug trade manufacturers than to manufacturers in most other lines. This fact, coupled with the fact that meritorious medicinal products suffer less and even gain ground in times of depression, make drug manufacturing a business with a real bright side despite the efforts of Campbell, Durrett, et al, to make the picture appear totally black.

ONE obvious means of preventing the discouraging effects of business depression from seriously affecting drug manufacturing houses is by the introduction of new products. And within the past year or so we have seen appear on the drug store counters all types of products ranging from mere imitations of successful specialties to products of the type for which there has always been a demand but no supply. True enough that when these products are not actually needed by the average man or woman, they will not sell. But people still must have those things which will keep them in good health and appearance.

DOUBTLESS the main sales of some of these products will be to the wholesalers with no real effort on the part of the promoters to move a very large percentage of them into the hands of the public within the time promised. In this manner, some manufacturers will turn to their own advantage the clogged channels of drug distribution about which they have loudly complained. Such products might properly be termed "Depression Babies," and interesting will be the facts regarding their mortality.

UNFORTUNATELY, however, there is no real method by which any manufacturer can tell in advance whether the public will accept a product or not. And it is this uncertainty that makes possible the acceptance by the distributing branches of the drug trade of those new products of manufacturers who have neither the ways and means nor the intention of making any real effort to move the goods off the druggists' shelves once they have been placed there. Under present conditions there are all grades of manufacturers and all grades of new products just as there are in more prosperous times.

Official Standards Interesting in general are the reports of the several meetings held during the past month by the various committees of revision of the U. S. Pharmacopoeia and the National Formulary. Interesting in particular are the reports of the indicated action of the committees on scope of both of these works, and the indicated action of the U. S. P. Revision Committee regarding the use of products falling below the standards specified.

The action on scope in both cases appears radical and might be subject to further consideration. It is questionable indeed for a revision committee to refuse to prepare standards for products desired by twenty per cent. of the medical profession of the country. The report that the fear was expressed at the National Formulary Committee that the book might become too big, is no excuse. If necessary, the N. F. could properly occupy a five foot shelf. It is this narrowness of viewpoint on the part of those in control of such matters which leads people unacquainted with the actual amount of work performed by the committees to belittle the entire work of the committees.

From the strict viewpoint of pharmacy, the more items there are in both the books of official standards the better. The drive for the use and prescribing of U. S. P. and N. F. products will not be well served by the physicians deleting seventy products from the U. S. P., and by the pharmacists themselves deleting two hundred and five items from the N. F. As to the manufacturer, dispassionately speaking, what does he care how many products they delete ? If they go to the limit, the products used will be nothing but specialties and manufacturers are always accused of deriving rather lucrative profits from their specialties.

The indicated decision to eliminate any general exemption of the standards and to include exemptions in the monographs of those items for which exemptions are deemed necessary, is wise and should make for a more rigid Pharmacopoeia. However, we are still not completely convinced that exemptions are at all necessary in the face of the interim revision provision of the Pharmacopoeia. But we do believe that the indicated change is a distinct advance which might be followed by further improvements. Perhaps some day the possibility of the government officials controlling any of the standards will be completely eliminated.

Household Remedies The finding by an Ohio judge that aspirin is a household remedy and is therefore exempt from the law allowing only registered pharmacists to make sales of drugs, strikes at those who would protect themselves from business competition by means of legislation. The law in question distinctly exempted from its provisions certain specified articles, "and other similar preparations."

The decision of the judge said in part:

"The right of the consuming public to buy a harmless article of whom it chooses, and the right of all merchants to sell a harmless article, is a right which the court must protect and which the legislature has not the right to destroy."

While we doubt whether any serious inconvenience would occur to an individual living in a city if this law were interpreted to restrict such products as aspirin, and whether if fact the purchaser would have to pay a higher price for the aspirin, the right of those living in rural communities to purchase packaged medicines wherever they choose should not be denied. So long as the country is barely able to support 50,000 drug stores, other channels of distribution for products which people demand are necessary.

• • •

Advertising and Banks We like the discussion which recently took place in the "New York Times" involving misleading advertising on the part of the banks. The discussion was concerned with the advertisements of banks offering their services as impartial advisers to the depositors in the purchase of securities. Free study of a depositor's list of holdings with advice how to increase both the yield and the safety is welcomed by all.

But as that dean of advertising, Ernest Elmo Calkins, points out in the discussion, these banks are merely trying to sell the securities they have underwritten through their affiliated companies; and as a matter of fact the man who is posing as a disinterested advisor is in fact a salesman pushing as hard as he can to get rid of the securities which the bank and its affiliates have bought.

When we hear of advertising being abused, the finger of scorn is pointed directly at drug and toilet goods manufacturers as the worst offenders. There are firms which call themselves drug manufacturers who indulge in deception as base as that of the banks, but no reputable drug manufacturer considers such firms as part of the industry, and certainly such firms are not part of the associations which represent the industry. On the other

hand, the banks indulging in this practice are among the largest and among the ones which ordinarily inspire the most confidence. If advertising control is to be put into effect, we believe that the advertising of the drug manufacturing industry will suffer the least change.

• • •

Government Standards Elimination of unfair competition in this country is being carried to a point at which the government is being urged to force all competitors to meet the specifications of one or a group of manufacturers who believe that their quality is the only one entitled to be sold without some qualifying mark branding other products as inferior. Not content with the results which must accrue from public education through advertising of superior quality and through the reaction of the public to quality products, these manufacturers would force those who can not afford higher priced products to be frightened into the purchase of them.

Such is the condition which will exist in the canning industry following the amendment of the Food and Drug Act giving the Food and Drug Administration the power to create standards for canned foods. This amendment is to be enforced under a set of regulations which provide for a substandard lable branded as follows: "Below U. S. Standard. Low Quality But Not Illegal."

Understand that the products bearing this warning are in no manner injurious to health and are in no manner unwholesome. They are merely not of the same color, tenderness, or size of that defined as standard. They are guilty of the terrible crime of being sold at lower prices than the superior grades. Thus the canning industry of the country has secured the aid of the government in putting on perfectly good foods a government stamp of disapproval which greatly prevent the marketing of these products.

If such a plan had been proposed by the Food and Drug Administration over the protest of the manufacturers, we could well understand the situation. But here is created a situation which no industry would dare to attempt by itself. If such is the condition which the Administration is led to believe is desired by the entire manufacturing industry, it is no wonder that the Administration attempts to control the drug manufacturing industry in its own peculiar way. If government co-operation in determining standards leads to such conditions, the drug trade must never let the U. S. P. be placed under government control.

Discount Abuse The practice of deducting cash discounts after the date upon which discounted bills are due is causing increasing trouble during the present period due to the fact that more people are willing to engate in this practice than is the case when business conditions are more prosperous. Just why purchasers should think that a discount is earned in twenty or thirty days under present conditions when there was no question of losing the discount after ten days, a year and a half ago, is more than we can inagine. We fail to follow the line of reasoning involved.

As a matter of cold logic, money is entitled to a smaller discount today due to the cheap money rates that prevail. The fact that payments are generally slow does not alter the situation, as money can be borrowed against the slow payments at a lower cost than that involved in allowing discounts after the due date.

But whether or not the change in discount conditions were to the advantage of the buyer or the seller, there is no reason why buyers should not live up strictly to the terms quoted and fully understood. It is certainly not to the credit of any firm to boast that it discounts all its bills when in fact it does this by attempting to pay the seller less than the fair bill that the seller presents.

• • •

A Price Puzzle The latest court decision regarding price maintenance under existing laws very clearly indicates the difficulty of carrying out price maintenance in a legal fashion. For in the case of the Shakespeare Company, manufacturer of fishing apparatus the Circuit Court of Appeals decided against the manufacturer in a rather involved manner.

The court conceded the right to refuse to sell price cutters and to announce this policy publicly. But the manufacturer can not attempt to convince the price cutter to discontinue these practices and be taken back as a customer. But the manufacturer may resume business relations with the price cutter if the cutter volunteers to change his ways. Which indicates that nobody knows whether or not prices can be maintained.

• • •

It is rather sad to think that when men in the industry are called to a conference of a Pharmacopoeia sub-committee to give of their time and experience in aiding the sub-committee, that only one member of the committee should be present. Yet such is the case.

Critics in Depression

It is surprising how much is being said at the present about the great mistake that was made by the passage of the present tariff bill. It is surprising how much is being said about other artificial means which have been used to advantage at various times to circumvent the natural laws of economics. New schemes will doubtless be proposed designed to accomplish the purpose of creating prosperity not only for this country but also for those other countries for which this country as a creditor nation is now accepting the responsibility.

When times are good, most anything goes. While the proposals adopted during prosperous times work to the advantage of some and to the disadvantage of others, it is not until the pinch of hard times becomes general that anyone really takes criticisms of these schemes as sound logic. Then everyone rises up and criticizes everything. Today hardly any method of doing anything that has to do with economics is safe from the most caustic criticism.

The fact of the matter is that during such times as this the evils which have alawys been attendant upon our present economic scheme stand out stark naked. No one has proposed a better order of things, but doubtless those who have felt the pinch feel that anything is better since they have nothing to lose. But with the return of prosperity steps will be taken to correct many of the most glaring evils of our present system and many of the critics of today will forget that these evils ever existed.

• • •

Ten Years Ago

From Our pages, July, 1921

Dr. H. H. Rusby and party, who are exploring the headwaters of the Amazon, have arrived at La Paz, Bolivia, according to a cablegram received by the Mulford Biological Exploration.

Colgate & Co., Jersey City, N. J., are planning the remodeling of the state reformatory buildings at Jeffersonville, Ind., for the establishment of a branch plant for the manufacture of powders, soaps, and kindred specialties. The work will cost $500,000.

Protection for synthetic perfume materials made in the United States is urged by the Manufacturing Perfumers' Association in a revised statement filed with the Ways and Means Committee of the House of Representatives.

Dr. Alfred S. Burdick has been elected to fill the vacancy as President of The Abbott Laboratories, caused by the death of Dr. W. C. Abbott.

The partnership of McIlvaine Brothers, drug importers and millers of Philadelphia has been incorporated. No change in the management or ownership of the company is involved.

• • • New and Non-Official • • •

• • •

The Perils of Radio Advertising

A certain company manufacturing a line of toilet goods had arranged for a test broadcast over one of the national networks. Dealers and salesmen all over the country were notified of the impending big event and instructed to listen to a certain station at a certain time, depending upon the section of the country they were in. Thus the entire organization sat tensely before hundreds of loud speakers at the appointed time. The program which came gaily over the air was that of a competitive line. Somebody in the radio company had blundered and given them the wrong time.

• • •

Paging Dr. Freud

We would like to suggest an interesting topic of discussion for the next meeting of the country's psychiatrists: "*Are the men who enter government service for regulatory work always crusaders, consciously or subconsciously, or is it the work and environment which makes them that way?*"

• • •

Maybe It Was His Boss

A major executive of one of the bigger companies of the drug industry had a luncheon engagement with one of the ranking officers of another company with which, it had been erroneously reported, it was planning to merge. Suddenly, to the surprise of executive B, executive A turned and fled, making a hurried, but undignified exit by way of the service elevator, without stopping to have lunch or even say goodbye. Now the question, laides and gentlemen, is who appeared unexpectedly causing the abrupt cancellation of a friendly luncheon.

• • •

Have You a Lawyer in Your Laboratory?

If this regulatory work continues, pharmaceutical colleges should make a legal degree a compulsory entrance requirement.

• • •

Our Own Aesop's Fable

Once upon a time there was a man who would be quite a liberal advertiser. One condition only he put upon those who would have his advertising. They must needs publish an article prepared by him. Most publishers, having closed their eyes, were quick to see the value of the material contained in this article and published it, thereby securing the advertising. One publisher at least did not. He, too, would have liked the advertising, as who wouldn't, but he could not see any merit in the article and would not publish it.

Suddenly it came to pass that all the publishers but this one received letters of protest from certain other suppliers condemning the publication of the aforesaid article because it contained little but keyed formulae requiring the use of that advertiser's products.

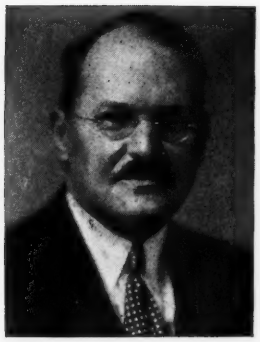
Moral—Two and two always make four.

• • •

Believe It or Not

Professional humorists to the contrary notwithstanding, drug stores still do a considerable business in drugs. For the average drug store in Washington, D. C., at any rate, the figures are, according to the Bureau of Census; drugs and pharmaceuticals, 30.73% of total sales; soda fountain sales, 28.15%; tobacco, 12.44%; prescriptions, 11.07%; cosmetics, etc., 3.68%; confectionery, 3.07%; toilet articles, 1.27%; rubber sundries, 1.13%; other miscellaneous merchandise, 8.46%.

Watching U. S. P. Revision



E. Fullerton Cook, representing pharmacy as Chairman of Revision

Radical action on scope and indications that exemptions from standards will be more closely guarded, mark general meeting of U. S. P. Revision Committee.

Dr. James J. Durrett, Drug Control Chief, who must enforce U. S. P. standards, and who therefore confers in their preparation

THAT the U. S. P. XI will contain many changes not only in the standards of the various items listed in the Pharmacopoeia, but also in items which are allowed to remain in the Pharmacopoeia, and in the manner in which exemptions from the standards of natural products will be handled, came to light at the two day session of the entire Revision Committee held June 26 and 27 at Pocono, Pa. The action of the Committee on Scope—which makes up the list of those items which will appear in the Pharmacopoeia—and the conferences regarding the use of goods below the U. S. P. specifications were perhaps the most outstanding developments.

Similarly with respect to the National Formulary Committee meeting which followed the U. S. P. meeting on June 29 and 30, the action in rejecting items included in former volumes, and in allowing some deviations which were taboo for many years, were the main changes.

The Committee on Scope of U. S. P. XI—composed of physicians—is said to have been in a radical mood. Rejected for the new volume were seventy items which appeared in U. S. P. X. Notable among these is Buchu and its preparations, Infusion of Digitalis, Fowler's Solution, as well as Squill. The meeting is said to have proceeded along the lines as follows. An item would be mentioned and the question would be raised as to whether anyone used it anymore. A physician would speak up and state that he used it continually and obtained excellent results. Another physician would state that he had used it and found it next to worthless and could see no reason why it should remain in the Pharmacopoeia. When such an item was put to a vote it was generally rejected.

It will be remembered that the heated debate over the control of Scope at the Pharmacopoeia Convention of May 1930 resulted in a compromise to the effect that the action of the Committee on Scope—as well as of all committees—is subject to approval by the entire Committee on Revision and may be altered by a two-thirds vote of that committee. The Revision Committee consists of two-thirds pharmacists, and one-third physicians. It has been expressed as doubtful, however, that pharmacists should take the initiative in advocating a change in the action of the Scope Committee unless some of the physicians themselves are dissatisfied and urge the pharmacists to aid them in effecting a change.

The question of the use of drugs falling below the U. S. P. specifications was the subject of conferences at the meeting. Prominent in these conferences was Dr. James J. Durrett, Chief of Drug Control, whose function it is to enforce the standards formulated by the U. S. P.

It will be remembered that this was also the subject of debate at the Pharmacopoeia Convention of May 1930, and at that time Dr. Rusby pressed for rigid standards by the elimination of exemption clauses in the General Notices. The adoption of the Rusby

motion at the convention was interpreted to mean that according to the new Pharmacopoeia, U. S. P. preparations would be made only from drugs which conform to the standards, descriptions, and tests of the particular items in the Pharmacopoeia.

While it is believed that there is no intention of changing this provision as it stands, it is stated that members of the Revision Committee as well as Dr. Durrett, Chief of Drug Control, have come to the conclusion that there must be exemptions allowed for some natural products as a guard against the impossibility of obtaining supplies. This of course is in view of the fact that the Revision Committee is not of the opinion that standards of items should be changed by means of interim revision when the standards imposed are not met by nature.

However, since the Rusby motion at the Pharmacopoeia Convention put the convention on record against any clause under General Notices favoring exemptions from the standards of the various items, and since the Revision Committee is said to believe that the Pharmacopoeia would be more implicit by defining each exemption definitely for the product to which it will apply, it is said that the problem will be worked out in this manner.

It is believed that the clause under General Notices will read in language approximating the following:

"Official preparations are to be made only from the drugs that conform to the pharmacopoeial standards, definitions, and descriptions provided for in the individual monographs."

Thus the responsibility for the condition of each item used for making official preparations is placed upon the monograph describing each particular product, and if any exemptions are permitted, the monograph will state the fact and define the extent of the exemptions.

A typical clause of this type is the following which is approximately the one suggested for inclusion under nux vomica—a product which most minds agree should be subject to exemption.

"The utilization of nux vomica containing twenty per cent. less alkaloid than set fourth in the definition, may be permitted under government authority for manufacturing official or other medicinal preparations in the event that commercial supplies meeting the requirements are unavailable, and provided that the finished official products conform to the definitions, descriptions, tests, and standards prescribed above."

It will therefore be seen that the Revision Committee will only give the government authority to vary from the standards of certain products, and that permission to vary from these standards will only be given under the conditions that supplies meeting the requirements of the Pharmacopoeia are unavailable. Also the extent to which variation from any particular standard is permissible is clearly stated. This makes the Pharmacopoeia much more rigid in this respect than it formerly was. The responsibility for the variation is placed directly upon the Food and Drug Administration which is apparently willing to accept this amount of responsibility. It is understood that the words "in an emergency" were suggested to Dr. Durrett for use in a cluse of this type, but Dr. Durrett is reported to have stated his unwillingness to accept responsibility for declaring an emergency under the demands of many importers interested in various products below the official standard.

Radical revision of scope was also effected by the National Formulary Committee which whole committee considers scope. Some two hundred and five items are understood to have been dropped for the forthcoming revision, while only some sixty to seventy items are said to have been added. The basis upon which items were dropped is surprising. Upon the results of a recent questionnaire to pharmacists as to what products are demanded, the committee acted. If not more than twenty per cent. of the stores carried an item it was dropped. This means that even though 10,000 drug stores in the country carry and have a demand for an item, this item has no place in the official book of standards. It means that these stores will have no standard of purity with which they must conform. Another basis of dropping an item was upon the information that not over 50,000 prescriptions per year were written containing the item.

Discussion of the antiseptic preparations contained in N. F. V. is said to have followed a request of Drug Control Chief Durrett that misleading titles be omitted from N. F. VI. This request was thought particular to apply to Antiseptic Powder N. F. V. which product is antiseptic when used as a powder, but which is not antiseptic when placed in solution. The fact is stated that the product more often than not is used in solution as a douche. A motion was made to drop the item from the N. F. and this motion was passed despite attempts to introduce a substitute motion merely to change the name of the item from Antiseptic Powder to Zinc and Boric Acid powder. Surprisingly enough, forty-six per cent. of the pharmacists reporting on the use of N. F. preparations reported that they had demand and carried in stock Antiseptic Powder N. F. V.

The discussion upon Antiseptic Solution N. F. V. was along the lines of its usefulness. Statements were made to the effect that it must be used full strength to be antiseptic, and that when so used it would injure the mucosae of the mouth and throat and do more harm than good.

A motion was passed to reconsider the general principles of the N. F. accepted at Cleveland, and a committee was appointed for the purpose. It is said that really what was desired by the chairman was little more than editing of the general principles and no radical changes are contemplated.

Essential Oils in the U. S. P.

Those associated with manufacture, importation and sale of essential oils, indicate what changes are necessary in U. S. P. to make standards of these products correct.

TO PHILADELPHIA on Wednesday, June 24, treked representatives of several of the leading essential houses in answer to a general call to a conference on the standards of volatile oils and isolates included in the U. S. Pharmacopoeia. The meeting was presided over by Dr. E. Fullerton Cook, Chairman of Revision U. S. P. XI, in the absence of W. O. Richtmann, Chairman of the Sub-committee on Volatile Oils. Professor Frank, Philadelphia College of Pharmacy, assisted Dr. Cook. in conducting the meeting.

The scientific experts of the essential oil houses were present for the purpose of giving the Sub-committee on Volatile Oils the results of their experiences with the standards appearing in U. S. P. X and previous volumes when used in testing the essential oils as they appear in commerce. The sub-committee will take this information into consideration when formulating the standards for U. S. P. XI. Among the scientists present other than the members of the U. S. P. XI Sub-committee on Volatile Oils, were: Dr. F. W. Brown, Magnus, Mabee & Reynard; Dr. F. D. Dodge, Dodge & Olcott; F. L. Hilbert, Fritszche Brothers; J. W. E. Harrisson, LaWall and Harrisson; Dr. A. G. Murray, Food and Drug Administration; Dr. A. Nicolaus, Clifton Chemical Laboratories; Dr. H. A. Seil, Seil Putt & Rusby; Dr. R. S. Swinton, W. J. Bush & Company.

The products, discussion of which resulted in suggested changes in the forthcoming U. S. P. XI, are:

Bitter Almond Oil was believed by authorities to be specified in the U. S. P. X too low in percentage of Benzaldehyde. It was suggested that the U. S. P. requirement be raised from 85 per cent. to 95 per cent.

Cade Oil was believed by many of the authorities present to be incorrectly specified in U. S. P. X as regards specific gravity. It was recommended that the range now appearing in the U. S. P. X, 0.980 to 1.055, be changed to a lower range such as 0.973 to 0.990, which is believed to be closer to the specific gravity of the pure oil. The fact that the present standard of specific gravity runs over 1.000 and thus permits of an oil heavier than water was thought to indicate that oils containing tarry impurities might pass the U. S. P. requirements. Another suggestion was that the test for solubility in ether be modified to permit not more than a slight floculent precipitate, since the authorities maintained that this precipitate always appeared and that true Cade oil is not entirely soluble in ether.

Cassia Oil was thought to be subject to the wrong method for determining the Cinnamic Aldehyde content. Use of the bisulfite method rather than of the sulfite method used at present, was urged for quicker and more concordant results.

Eugenol was discussed and a change of the solubility test was recommended by the authorities present who thought a better test would be to require that it be soluble in 30 cc. of half normal solution of caustic soda. Inclusion of a refractive index specification of 1.064 to 1.066 was also recommended.

Eucalyptol was thought by the authorities to be quite suitable to a refractive index specification and 1.457 to 1.460 was recommended by the authorities as the refractive index of the true product.

Lemon Oil was discussed first regarding the widening of the range of the U. S. P. specification of refractive index. The present range, it is maintained, is too loose to overcome the errors met in reading the commonly used instruments. Another suggestion was that a specification be included for the non-volatile residue of Lemon Oil as is the case in the specifications for orange oil.

Lemon Oil, American, was discussed as a product which some wished to have included in the U. S. P. It does not meet the requirements for Lemon Oil in U. S. P. X mainly because its citral content is only 2½ per cent., against a specified minimum in U. S. P. X of 4 per cent. which requirement is met by the imported Italian Lemon Oil. It was maintained by some that the average American Lemon Oil would not meet the other requirements of the U. S. P. X, since it gives higher figures for optical rotation, higher and lower figures for refractive index, and lower figures for specific gravity. Therefore, many were of the opinion that it should be admitted to the U. S. P. XI as a special grade. Thus there would be two types of Lemon Oil which would be official—the Imported and the American. That there is ample precedent for such a step was pointed out by references to the various grades of Aloes, Gum Benzoin, and Ginger from different sources which are now official in U. S. P. X under individual specifications. Some were of the opinion that while there was not the same "kick" to the American oil, the bouquet of the American oil was superior to that of the Italian oil.

Methyl Salicylate, Birch Oil, and Wintergreen Oil came up for considerable discussion as to whether or not it was proper in view of present knowledge to attempt to differentiate between them. A majority of the authorities present were believed to favor the view of referring the matter to the Committee on Scope with a recommendation to having only one heading—Methyl Salicylate—in the U. S. P. XI. This heading would include Methyl Salicylate of all three types—Artificial, Birch Oil, Wintergreen Oil. The suggested refractive index for Methyl Salicylate in U. S. P. XI is 1.535 to 1.538. The suggestion was also made that the test for petroleum products be omitted from the forthcoming revision.

Mustard Oil specifications were believed faulty as to the distillation test and the recommendation was made that this be omitted. It was further suggested that the test for solubility in sulfuric acid which appeared in some former revisions be replaced in U. S. P. XI.

Nutmeg Oil specifications should be changed, in the opinion of the authorities, both with respect to refractive index and optical rotation. It was suggested that the refractive index be given a lower limit of 1.4778 instead of 1.4780. It was also suggested that the optical rotation be given a lower limit of 9° instead of 12°.

Pinus Pumilio Oil specifications were criticised mainly from the point of solubility. The authorities were quite in agreement that the oil is not soluble in 10 volumes of 80 per cent. alcohol as specified in U. S. P. X. It was the thought of the authorities that a solubility be specified in 4½ to 8 volumes of 90 per cent. alcohol. The distillation test specification that 1 per cent. of the oil distil below 165°C. was believed to be incorrect in that 3 per cent. of the oil actually distils below 165°C. Also it was thought by the authorities that the specification for an ester content of 5 per cent. was too high since sometimes it runs as low as 3 per cent.

Rosemary Oil was believed by the authorities present to be incorrectly specified in the U. S. P. X as to optical rotation. The figure which now appears in the U. S. P.—0° to +15° is stated to perfectly accord with the optical rotation of the Dalmatian oil which was common in the market many years ago. But today, however, the Rosemary Oil commonly imported and used for U. S. P. purposes is a Spanish oil with an optical rotation of —5° to +10°. It was therefore suggested that the latter figure be made the U. S. P. XI specification.

Sandalwood Oil came up for discussion mainly because of the application to recognize the Australian oil as official. However, it was stated by some authorities that the Australian Sandalwood Oil is not a true oil distilled from a certain wood, but is rather a fraction of the oil. Therefore, it is rather thought by these authorities that it would not be proper to permit this product to come into the U. S. P. under the same heading as East Indian Sandalwood Oil. The Sub-committee on Volatile Oils is not interested in the therapeutics of the oils with which they deal, but rather with the proper classification and identification of these oils. Therefore, this committee probably would only formulate specifications for the product following a recommendation by the Committee on Scope that it be admitted because of its therapeutic properties which is the only basis upon which it could properly be declared suitable for such uses as the East Indian Sandalwood Oil.

Sassafrass Oil was thought to be incorrectly specified in U. S. P. X regarding its optical rotation which is now placed in U. S. P. X at +3° to +4°. Authorities were in agreement that this figure is too high since much true oil runs as low as +2°, and it was thought that this should be made the lower limit. Another recommendation was the addition of a congealing point test of a minimum of 5°C. as a means of checking the safrol content.

Turpentine was discussed from the point of including a color test in the U. S. P. XI. The authorities were quite in agreement that such a test would be a valuable addition. Comparison would be made in Nessler tubes against a standard.

Wormseed Oil specifications were questioned as to the method now used for determining the ascaridol content. It was suggested that this be changed so to insist upon a thorough shaking just before the final reading is taken. This, it was thought, would assure comparable results.

Discussion was also engaged in as to the advisability of including a chapter preceding the monographs on the volatile oils which chapter would describe the general methods of procedure applicable to all oils.

Trade Commission and Price Maintenance

Objecting to price maintenance, the Federal Trade Commission bases its case upon reasoning that few, if any, can understand.

FROM whatever angle viewed, the preliminary report of the Federal Trade Commission regarding its investigation into the advisability of price maintenance legislation strikes a sour note. While it is true that the Commission has given a definite recommendation against such legislation, the foundation upon which this recommendation rests is shaky and not even clearly defined. Also the Commission has partly based its conclusions upon situations that have very little, if anything to do with the case, and which in fact are none of the Commission's business to advocate or to condemn.

Coming from a federal agency which is supposed to be well acquainted with the conduct of business in this country, the report shows little regard for a continuance of the principles upon which that business has been built. The matter of merchandising by trade mark strikes the Commission as something which is victimizing the public and which should be discouraged or undermined. The Commission does make the bald statement the "Price maintenance would first affect well known brands," but does not indicate how it believes such brands would be affected. It further states that although prices of 10,000 drug store items proved that the average cost prices of nationally advertised articles were greater than those of competing goods, the percentage margins of profits on the nationally advertised goods were lower. Data for grocery products, states the Commission, showed generally the same results.

To quote from the report:

"Certain representatives of the medical profession stated that the principal reasons manufacturers sell proprietary drugs under their own trade names or brands are to restrict to themselves the benefits of their advertising, and to obtain for their products prices higher than they would otherwise command if sold in open competition under non-proprietary, officially recognized chemical designations.

"The American Medical Association characterizes the difference in price as 'The cost of the proprietary name to the consumer.'

"Unidentified by a trade mark, acetylsalicylic acid may sell to retailers for fifteen cents an ounce, but, under its trade name, aspirin, it costs them eighty-five cents an ounce."

The ridiculousness of the illustration of the point with aspirin is readily appreciated by any drug manufacturer who knows that the public does not buy powdered aspirin to which the commission refers. Aspirin tablets are bought by the consumer from various makers using the mark (which is now public property in sales to the consumer) at competitive prices. The small amount sold as powder is used by the druggist in compounding prescriptions. There is no indication from the inclusion of aspirin in the report that the Commission knew what it was talking about.

The Commission naturally attempts to support itself with the opinions of those who would be most directly affected by such legislation—manufacturers, wholesalers and retailers. But it discards the opinions of those who don't lean its way upon arbitrary grounds.

With reference to manufacturers who were questioned on the subject the Commission finds that of the 691 manufacturers reporting, sixty-one per cent. reported no preference as to legalizing price maintenance, while ten per cent. as to number of companies, and four per cent. as to volume of business opposed it, twenty-nine per cent. having a larger percentage of the gross income favored it.

But this does not tell the whole story with regard to the manufacturers for the report points out that sixty-nine per cent. of the 849 manufacturers who replied to the first general questionaire favored price maintenance, while only twenty-nine per cent. of the 691 who returned financial data summarized in the report expressed such preference. Thus the opinions of those who refused to supply the Commission with detailed figures as to his gross sales, net profits, etc. (which information the Commission had no right to ask) were disregarded in the final report.

Wholesalers, chain and department stores, independent retailers all were questioned though it is not

clear just why, for with reference to wholesalers the Commission states:

"Wholesalers almost unanimously favor resale price maintenance, which attitude may be influenced by a decline in wholesaling and the growth of chain stores and co-operative buying."

Under the heading, "Chain and Department Stores Oppose Price Maintenance," the Commission offers the profound conclusion that:

"The alignment of distributors for and against price maintenance is, to a very large extent that of the conservative merchant who would do business in the customary way, against the newer, less conservative, often large-scale distributing unit, that frequently owes its success to innovations in merchandising methods, often involving price competitions."

While the preliminary report does not reveal information upon the earnings of manufacturers, wholesalers and retailers for and against resale price maintenance, the statement is made that such information will be available in the final report for groceries, hardware, drugs and dry goods. We fail to see what these figures have to do with the soundness or unsoundness of changing conditions, but perhaps the final report will reveal the reason.

Many look upon the statement of Federal Trade Commissioner William E. Humphrey as the most significant thing in the preliminary report. Says Commissioner Humphrey:

"I doubt the advisability of voluntarily sending a report of this character to Congress. I affirmatively refrain from any expression, favorable or unfavorable, as to any opinion, inference, conclusion or recommendation which the report may carry.

"I concur in its transmittal only so far as the same may be helpful as a report upon the facts."

Industry's Books

Publication and Advertising Agency Problems, by A. J. Slomanson, 142 pages, Lloyd Publishing Co., New York, N. Y.

This book consists of a collection of articles written for the executives of publications and advertising agencies. Presented in four parts as follows: publication problems, space buying and selling problems, industrial publication and advertising agency problems, and advertising agency problems.

Organic Chemistry for Medical, Intermediate Science and Pharmaceutical Students, by A. Killen Macbeth, 296 pages, Longmans, Green and Co., New York, N. Y., $2.80 net.

The second edition of this work prepared for elementary or beginning students of organic chemistry, especially recommended for those preparing for a medical or pharmaceutical students.

Facts and Fetishes in Advertising, by E. T. Gundlach, 672 pages, Consolidated Book Publishers, Inc., Chicago, Ill. $5.00 net.

Written in interesting fashion for advertisers by an advertising man who believes that the power of much of our advertising could be increased by the application of extremely simple principles, more so by the elimination of false theories. He points out that many fear a measuring stick but that advertising generally will benefit by the use of more scientific method in tracing results.

Noblesse Oblige

We are reprinting in full two more reviews of our recently published Catalog and Directory. These reviews, as is indicated, appeared on the pages of two other contemporaries whose interest, in thus reviewing the volume for their readers, we appreciate.

Reprinted from "The Pharmaceutical Era"

DRUG MARKETS CATALOG AND DIRECTORY. 1st edition, 1931. Published by Drug Markets, Inc., 101 West 31st street, New York City.

This book of nearly 500 pages, 9 by 12 inches in size, contains a vast amount of information for daily reference use in purchasing, production and technical control which should appeal to manufacturers of pharmaceuticals, proprietary medicines, cosmetics, toilet preparations and flavoring extracts. The contents of the book are presented in seven sections, as follows: A, Machinery and equipment; B, Packages and shipping material; C, Chemicals and raw materials; D, Essential oils, aromatic chemicals, flavors; E, Botanical drugs and spices; F, Associations and councils; G, Prices and imports. Each of these sections shows an intelligent and comprehensive arrangement of facts pertaining to the more than 2,500 products listed, as well as information relating to machinery, equipment, containers and packaging materials used by the manufacturing drug trade.

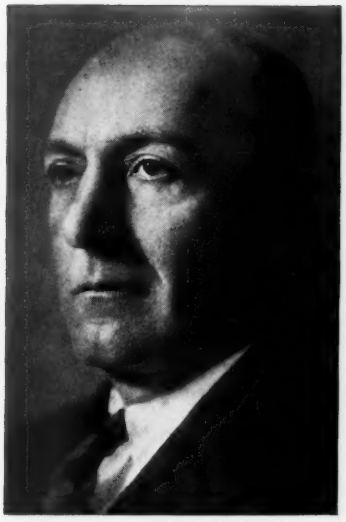
It would be difficult to single out any section of the book for special criticism, as all of them invite the reader's confidence. It is noted that the section on aromatic products and flavors, and the section on botanical drugs and spices have been compiled under the supervision of Harvey A. Seil, Ph.D. and Earl B. Putt, Ph.C., B.Sc., of Seil, Putt & Rusby, Inc., New York, well known authorities in the technical examination of products in these special fields. Each section contains a directory of the principal suppliers of the products named therein, while a glossary of chemical and raw material synonyms is appended to each section. Section G. gives back prices on more than two thousand raw materials used in the United States for the manufacture of pharmaceuticals and miscellaneous products, and a list of imports for the past ten years on some two hundred of these items.

Reprinted from "The Perfumery & Essential Oil Record," London

DRUG MARKETS CATALOG AND DIRECTORY, just published by Drug Markets, Inc., 101 West 31st Street, New York City, is an extremely useful reference for the purchasing department, the factory and the laboratory of manufacturers. It is a technical and commercial digest of machinery and equipment, packages and shipping materials, essential oils, flavours, aromatic chemicals, botanical drugs and spices, together with a directory of principal suppliers. The sections are: A, machinery and equipment; B, packages and shipping materials; C, chemicals and raw materials; D, essential oils, aromatic chemicals, flavours; E, botanical drugs and spices; F, associations and councils; and G, prices and imports.

Physiological Assays in Dispute

There should be changes in the Pharmacopoeia, says Director Campbell, who, however, continues to enforce at least one of the present standards in a manner which some manufacturers' scientists consider absolutely unintelligent, and legally and scientifically wrong.



THE question of physiological assays of drug products as appearing in the Pharmacopoeia and as enforced by the Food and Drug Administration was the subject of a rather lengthy discussion at a special meeting held in Philadelphia, June 24. Present at this meeting—which was in the nature of a conference—were some thirty-five or forty men including Chairman of U. S. P. XI Revision Committee Cook, Chief of Drug Control Durrett, Senior Drug Control Chemist Murray, Drug Control Bio-assay Expert McCloskey, Harvard medical's Reid Hunt, contact committee members, manufacturers' scientists, Pharmacy Professors, and others.

The discussion included the standards for such drugs as aconite, digitalis, ergot, and strophanthus. The question of whether these standards should be changed by means of interim revision was raised with the government officials in favor of such a move but with the manufacturers and others in the trade generally opposed. The government officials were thought to be anxious to be rid of the responsibility of enforcing standards which are not satisfactory and which are open to serious question as to value, while the trade is thought to oppose such a move on the grounds that the interim revision would not reach all those who use the Pharmacopoeia as there is no means of getting the change in the hands of every one who has bought a U. S. P. X.

The difficulty lies in the fact that as the standards for these products are being applied at present by the Department of Agriculture, great uncertainty surrounds the standards in the minds of manufacturers. Conducting their own tests along what seem to them to be intelligent lines, they find that they are unable to produce products which meet the standards as laid down by the Administration. The Administration claims that it is interpreting the Pharmacopoeia to the letter, and that any fault which manufacturers have to find must be laid at the door of the Revision Committee.

Manufacturers are reported as becoming sick and disgusted in the manner in which the Administration is handling some of these standards and there are reports of the unwillingness of some manufacturers to continue to produce some of these products because they feel that they can not produce a satisfactory product under the present method in which the Administration applies the U. S. P. standards. Some manufacturers claim that the Administration is not only scientifically wrong, but also legally wrong. Others are willing to give the Administration the benefit of the doubt with regard to the legality of its case.

Aconite method in the U. S. P. X is attacked from many angles, one of most obvious being the fact that there is no attempt to standardize the guinea-pig against seasonal variations.

Digitalis assay is also questionable, although the method is said to be more satisfactory than the others. In defense it is stated by the Administration that it has had difficulty in obtaining frogs in proper con-

dition for this assay. A breeding frog is not suitable for testing, according to Chief Durrett; a frog carrying eggs weighs more than one without eggs and does not react the same as a non-breeding frog to a dose of digitalis. The frog breeds in the Springtime, and this season varies in different parts of the country beginning with January or February in Florida. It has been found necessary, therefore, for the Administration to order frogs from different parts of the country depending upon the season. This is said to be a vital consideration in connection with the important research work being conducted by the Administration on digitalis, and how it behaves under different conditions of age, light, air, heat, and other factors. This work, the Administration hopes, will enable it eventually to place its finger on the exact spot at which trouble occurs in connection with the deterioration and weakening of digitalis preparations on the market.

Ergot Method Objections

Ergot assay method in the U. S. P. XI is open to objection from several angles one of which is the manner in which the standard is derived. This subject was brought to attention a few years ago, but now it seems to have assumed greater importance because of the careful manner in which ergot standards have been treated since that time.

The fact of the matter is that the U. S. P. provides for the determination of a standard by the collection of ten samples of the crude ergot on the market, and the preparation of a fluid extract from a mixture of these samples. This composite sample is supposed to be standard a article, providing, of course, that the crude ergot used was not substandard.

But although anybody can prepare a standard in that manner, and thus attempt to check his product against the Pharmacopoeia requirements, it is necessary for his product to conform to the actual standard prepared by the Food and Drug Administration so that his product will be acceptable under the Food and Drug Act. It is at this point that the difference arises for the reason that the following clause appears in U. S. P. X.

"In order to facilitate the adoption of these standards and to provide a greater degree of uniformity in the application of these assays, the officials of the Bureau of Chemistry of the United States Department of Agriculture, at Washington, have indicated their willingness to supply standards conforming to the new pharmacopoeial standards."

Under these conditions, the standard extract prepared by the Administration becomes the official standard which every manufacturer must duplicate, even though he might obtain a different result in his own preparation of a standard. Also, due to the fact that no ergot is gathered in this country, every lot that appears on the market is 100 per cent. or greater with respect to the U. S. P. standard or it would not be permitted to enter the country. Under these conditions each new lot of standard prepared by the Administration is more potent that the former one, and the standard is constantly increasing in potency. Officials at the Administration are free to admit the existence of this condition and state that while last year's standard might be considered 100 per cent., this year's standard due to the greater purity of the ergot now found in the market, might be regarded as equivalent to 125 per cent, and next year's standard might be considered equivalent to 150 per cent. But yet the Administration is establishing the official standard, and is each year raising this standard although the U. S. P. intends the standard to remain constant. On the other hand, if there was a world condition of low potency ergot, the standard would just as constantly decline, although it is difficult to see how, under present conditions this material would find its way into this market for the preparation of a standard.

Government Rests on Monograph

According to officials, the Pharmacopoeia monograph on ergot is itself responsible. At the Department it is denied that the official course is either legally, technically, scientifically or morally wrong. If there is any objection to be found to the course pursued, it should go to the terms of the Pharmacopoeia monograph rather than be directed at the government.

The answer is said by officials to be found in setting up something else than a composite standard of crude ergot, upon which the standard of potency should depend. Just what that new method or new standard should be, officials were not prepared to say for publication.

According to a trade view, there is no general objection to the bio-assay work carried out by the government. But there is some "difference of opinion" about the ergot assay. The latter is largely a matter of departmental interpretation, it is said in trade circles. It is said to be a very" complex and indefinite sort of thing." Many technical factors enter into consideration, it appears. Trade experts say that the matter has developed into a question of interpretation of the results of the test on a rooster's comb, and that opinions differ as to what was intended by the U. S. P.

There has been talk about improving the ergot assay method, but trade opinion seems to be that that would require long study to determine whether a new method would be better. Some changes have been suggested in the wording. There is dissatisfaction on both sides. The government doesn't consider the method satisfactory. Neither do the manufacturers. It is a question, however, of getting something better. Some experts, it appears, favor putting in certain new details in the pharmacopoeial provisions

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Field of marigolds in the Seine-et-oise Department of France, near Paris

The Souci, or Marigold

IN FRENCH the word for marigold is *souci*, which, according to Larousse, comes from the latin *solsequia*, making it easy to understand why the marigold is said to belong to that group of flowers which always turns toward the sun. Rolet and Bouret treat the marigold used in pharmacy in their work on the culture of medicinal plants,and that this flower is receiving attention in France may be seen from the accompanying photographs, taken expressly for Drug Markets in connection with a recent visit to Milly-en-Gâtinais, not far from Paris. The field shown is one under cultivation on the aromatic plant reserve of Mr. and Mrs. Thévenin-Mazars, who have had unusually good success with culture like the marigold, which sells comparatively well in France. They do a considerable business on the marigold, particularly among some of the French pharmacists using this culture for the purpose of making certain eye lotions, recommended for several troubles affecting the eyes.

The marigold used by the pharmaceutical trade is that known as *Calendula officinalis*, L., the word *calendula* coming from the Latin, *calendes*, meaning first days of each month, among the Romans.

Leaves of the marigold plant are spatulate, whole, or slightly dentate, the superior ones almost embracing or clasping the lower part of the leaf. Flowering of the marigold extends over a considerable period of time, and the flowers themselves are of a fine saffron yellow, aromatic and quite large.

The marigold, as everyone knows, is used for ornamental purposes in many gardens, and the cultivation of it has brought into existence many different varieties, the most popular and best known species being the so-called double marigold, with very large flowers. These double marigolds are highly decorative and come in various colors, allowing a gardener to produce very striking effects.

Then there is the wild marigold, *Calendula arvensis*, L., *Calendula ceratosperma*, Viv., which has flowers that are of a paler shade than the *officinalis*. This wild species grows spontaneously in cultivated ground, and among the vineyards of Southern France.

Another kind of marigold is the *Calendula pluvialis*, Thumb., which originated in South Africa, which close with the approach of rain.

The *officinalis* exhales a penetrating aromatic odor, slightly bituminous, and to the taste the roots, and particularly the leaves are bitter and acrid.

Nothing is easier to raise than the marigold, as it is very hardy and abounds in flowers. It is not at all particular as to the soil, although consistent good results may be obtained by confining this culture to a loose, fresh soil, well worked and sufficiently fer-

tilized. Soil that has been completely broken up and rendered mellow is by far the best for the marigold.

The seeds are sown from March to May, or June, to assure flowers from springtime to autumn. In the South of France plantations are also established during the months extending from July to October, in order to obtain flowers during the winter, as well as in the spring.

Planting can be done directly in the soil available, or, if desired, the plantation may be raised in a nursery. When the latter choice is made, the work in the nursery is done March-April, in order to be able to place the plants during the months of May and June. Some growers prefer to keep the early plants in a protected place, and then replant them the next spring. This is a matter of individual choice, depending upon the requirements of the region in which the grower finds himself.

Care to be taken of the marigold consists in watering weeding, and hoeing. Now and then it is advantageous to mix a liquid fertilizer with the water used for irrigating purposes.

There is a certain mushroom growth known as *Entyloma calendulae*, which produces spots on the leaves, leading to a type of decay. This must be very carefully watched, in a plantation is to be kept in a profitable state.

The caterpillar of the butterfly family, known as *Mamestra brassicae*, also attacks the plant.

According to Rolet and Bouret, if the plants are not yet in bloom, atomize an aqueous solution of extract of aloes, and *veratrum album*, or white hellebore. This will protect the culture against further attack.

The gathering of the flowers, with calyx, but without peduncle, generally occurs during the months of June and July. Among certain growers only the petals are gathered, depending upon the demand among the herborists and pharmacists. It is the petals that are used in many instances by the pharmaceutical trade for products like the eye lotions already mentioned in a previous paragraph.

Drying must be carried out very rapidly, in a well-aerated place, and the flowers must be spread out thinly, in order to secure the best results. The sechoir or drying shed should be well-ventilated and the floors or racks scrupulously clean. Furthermore, once placed in the drying sheds, the marigolds must be left undisturbed. Every effort should be made to try to conserve the attractive yellow color of the petals. The market value of the marigold depends a great deal upon this drying process, as the flower itself is supposed to lose some of its value when drying. Imperfect drying methods can, therefore, practically spoil the sale of a yield, thus resulting in losses which could be very easily avoided by observing a few rules applicable to this interesting culture.

(*Continued on page 32*)

Is Manganese a Tonic?

SINCE publication, in April Drug Markets of the views of Dr. J. J. Durrett, Chief of Drug Control, concerning "Permissible Tonics", questions are reported to have been raised in drug trade circles concerning certain tonic ingredients discussed by Dr. Durrett, The principal one of these questions concerned manganese and its labeling as a tonic.

Dr. P. B. Dunbar, head of the Food and Drug Administration, Department of Agriculture, denied reports that the Department had overruled Dr. Durrett in connection with that matter. Walter G. Campbell, Director of Regulatory Work, in the Department, said he had heard nothing about any such alleged incident. So did other officials.

It appears, however, that differences among medical authorities as to the tonic value of manganese have developed. Some of these differences appear to be outside of the Department. Others may possibly be inside.

Mr. Campbell referred Drug Markets to Drug Control for comment on questions that have arisen. When Drug Control was first seen about the matter Dr. Durrett was absent on account of sickness, and the subject was discussed with Dr. Frederick J. Cullen, senior medical officer of the organization.

"Formerly medical journals generally treated manganese as a tonic," said Dr. Cullen. "Some of the more recent works have indicated that manganese is beneficial in a manner similar to copper, that is, when administered with iron, and doubt has been expressed in such publications as to the efficiency of manganese as a tonic when administered by itself.

"In view of these circumstances, we are putting the responsibility upon the manufacturers. We have not rejected any manganese tonic preparation. We do not reject medicinal preparations. It is the law itself that does that, if they are adulterated or misbranded. We sometimes offer criticism. In doing so we take into consideration the most recent information on the subject.

"If continued experiments with manganese should show that the use of manganese is beneficial as a tonic, only when with iron, the manufacturer is responsible for any statements on his label that manganese alone has tonic value. He would be liable, under such circumstances, to a charge of misbranding.

"The Food and Drug Administration has not changed its rulings regarding manganese. We have just added to them a statement making the responsibility for manganese claims to rest with the manufacturer.

"We are not taking regulatory action against manganese tonic preparations until research work on

(*Continued on page 36*)

Labeling Lotions, Liniments, and Salves

Drug Control covers the wide field of external preparations in this interview on what constitutes lawful label statements in the opinion of the Department.

IT APPEARS that a good many preparations for external application are being caught up by the Food and Drug Administration in connection with its campaigns against alleged false or fraudulent antiseptics and other classes of preparations covered specifically by the various projects on which the Administration is working in its efforts to enforce the food and drugs act. Many preparations for external application do not come within the purview of the Administration at all. They are not subject to the food and drugs law if no therapeutic claims are made on their labels. In this class are a great many cosmetics. If, however, a therapeutic claim is made for a preparation of cosmetic type, it thereby becomes a drug and is subject to the law.

It has been claimed for a number of external application preparations, such as for the hair, or the skin, for rashes, eruptions, boils, etc., that they are antiseptic in action. The Food and Drug Administration hails "from Missouri" when such a claim comes up. It must be "shown" that any alleged antiseptic preparation is really antiseptic in action, if it is labeled as antiseptic. If it does not make good on the antiseptic claim, woe be unto it! Dr. John J. Durrett, Chief of Drug Control, and other Department of Agriculture officials are unanimously "thumbs down" on antiseptic claims for non-antiseptic preparations, whether they be for external use or for internal application.

"We are not making a strong campaign with reference to preparations for external application as such," said Dr. Durrett to Drug Markets. "If, however, unwarranted therapeutic claims are made, they certainly do not comply with the law." Dr. Durrett made it clear that if such preparations are not seized it may be simply becuase the Administration has not the time, the force or the money to deal thoroughly with such cases in the midst of what it considers more important projects that it is engaged upon.

"A hair tonic as such is not a drug within the meaning of the law," said Dr. Durrett. "It may lay claim to be a cure for baldness, but we hold that baldness is not a disease. If it claims to be a cure for dandruff that would be a mild therapeutic claim. The preparation might make good on this last claim. We would hardly seize it on that claim alone, however, even if it did not make good. But if it were claimed to be antiseptic when it was not antiseptic in fact, we would go after it on this claim. In doing so at the same time we would probably go after it on the basis of other false or fraudulent claims."

It is understood that this same general rule is applied to the consideration of external preparations as a class. They include a great variety of lotions, ointments, salves, liniments, and other preparations for external application. At the same time Dr. Durrett made it clear that he considers therapeutic claims made for a great many preparations of this class are very much unwarranted and in excess of the real facts.

One large class of external preparations is labeled for cure or treatment of pimples, an annoying condition to which many people, especially the young, are subject. Admittedly this is a therapeutic claim. The Chief of Drug Control does not believe that such claims should be made.

"The causes of pimples vary greatly," said Dr. Durrett to Drug Markets. "They may be due to a definite infection. Can an external application reach it ? Diabetic persons are peculiarly susceptible to infection that may result in pimples, boils, etc. It can not be said that a diabetic condition can be cured by an external application. Pimples range all the way up to severe cases of acne. Where there are so many degrees of cases of pimples and where you

have such a wide variety of their causes, how can an external application be properly claimed to be an adequate remedy for pimples? In my opinion, a labeled claim for treatment of pimples does not come within the food and drugs law. If you create the impression that your preparation is a remedy for pimples I do not see how you can comply with the act, because pimples arise from a very great variety of causes. If we had the force sufficient to cover all violations of the law such products would be seized."

Specifically, Dr. Durrett stated that he knew of no remedy for acne or for boils. Therefore, he thought it illegal to label a preparation with a claim for treatment of those ailments. However, he emphasized that this situation represents a comparatively minor field, from the standpoint of these enforcing the food and drugs law.

Types of Eczema

Dr. Durrett was asked about alleged remedies for eczema. He replied: "Eczema may be caused by irritation from a paint or dye or some other substance. Or it may be due to infection. Certain ointments themselves might produce a condition akin to eczema. Eczema is nothing more nor less than irritation of the skin. It may be a local irritation, or it may not. Where there are eczemas due to a variety of causes, you can not have, so far as I know, any preparation efficacious in all of them. Therefore external preparations should not be labeled for eczema.

"In cases of pellagra there is an irritation of the skin on the cheeks, forehead, the backs of the hand, the feet, that is closely akin to eczema. Pellagra is caused by a diet deficient in certain vitamins. The definite remedy for this disease is vitamin G, which is found in certain foods. When you clear up the internal condition you clear up the skin irritation accompanying it.

"Again, there are eczemas that are definitely known to be syphillitic in character. The treatment for them is the treatment for syphillis, which is mercury or salvarsan. Properly administered, they will cure."

"What about a therapeutic claim for cure or treatment of 'skin diseases'"? Dr. Durett was asked.

"'Skin disease' is one of the broadest terms in medicine," replied the Chief of Drug Control. "It is entirely too broad to use on a label for an external preparation. The same is true about such terms as 'rash' or 'eruption'. Such terms may cover anything from a simple irritation of the skin due to eating strawberries, all the way to skin conditions that mark such serious diseases as smallpox or measles. These latter conditions can not be treated except by treating the thing producing the irritation. The cause of some skin irritations can be ascertained. On the other hand, sometimes it can not be ascertained."

Asked about ointments and the proper ways for labeling them, Dr. Durrett said that zinc oxide ointment acts as a protective covering and is soothing in its effect. "You can say such ointments constitute a protective dressing and may be applied to any such conditions as a burn, chafing, rubbed parts, and the like," he continued.

"Sulphur ointment will cure the itch if properly applied, and may be so labeled. Ammoniated mercury ointment may be labeled for impitigo, which is an infectious condition of the skin. Certain ointments may be labeled as soothing. But ointments should not be labeled antiseptic unless they are really antiseptic."

Lotions and Liniments

Coming down to lotions, Dr. Durrett said that a proper sulphur lotion would cure the itch, and may be so labeled, provided it is used properly, but that it is more difficult to handle than sulfur ointment.

"Some lotions are cosmetic, some medicinal, and they range all the way from rubbing alcohol to a heavy protective dressing," said Dr. Durrett. "Mostly lotions are cosmetic in their effect, although some have definite therapeutic properties. The latter include calomine washes and rubbing alcohols.

"Liniments are in the group of lotions for external application. They are almost universally counter-irritant in their action, and may be so labeled. They are not necessarily anodyne in their effect, although some are anodynes.

"Counter-irritants act by producing irritation on the surface where applied. This brings about an increased supply of blood at that point, which causes redness and also produces warmth. All of which may be comforting to an individual suffering from certain discomforts. Counter-irritants may be labeled as such, and so may liniments. Manufacturers, however, should be careful about therapeutic claims for such preparations."

Two cases arising under the food and drugs act have been decided against the government in recent months, and both involve preparations of the counter-irritant or liniment type, in part at least. One was Lee's Save the Baby, a preparation for rubbing and treatment of respiratory diseases, etc. The other is B. & M. External Remedy, a liniment. In the first of these cases the government has taken an appeal from the federal district court in Connecticut to the federal circuit court of appeals for the second circuit, which includes New York and Connecticut. In the second case the government is considering an appeal from the District of Columbia Court of Appeals to the U. S. Surpeme Court, in view of the former's decision in injunction proceedings of the National Remedy Co. seeking to stop multiple seizures. Dr. Durrett was asked whether a counter-irritant for local use could be labeled for treatment of writer's cramp. He replied that the counter-irritant might "divert your attention from one bad thing to the second bad

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The Germicidal and Therapeutic Applications of Soaps*

By John E. Walker, M. D.
Opelika, Ala.

SOAPS are highly germicidal against a number of pathogenic organisms. Their activity against streptococci, pneumococci, meningococci, diptheria bacilli, influenza bacilli and *Spirochaeta pallida* is such that they compare favorably with many of the recently synthesized chemicals that have been heralded, at least in advertisements, as crowning achievements of modern chemistry. The standard textbooks on surgery and bacteriology, however, make practically no mention of these properties of soaps. This is partly becuase soaps are not germicidal against the organisms used as a routine in testing germicides; namely, typhoid bacilli and staphylococci. Also, the recognition of the germicidal properties of soap is comparatively recent. Despite the fact that their limited activity against staphylococci and typhoid bacilli precludes their use as general germicides, it has been amply shown that their hygienic value by no means rests solely on their detergent properties.

In addition to their use for purposes of hygiene, Renaud[1] has recently revived interest in the possible therapeutic application of soap. He used a 2 per cent. solution of sodium oleate as an irrigation and as a wet dressing for ulcerated surfaces and abscesses. His results were very favorable in tuberculous abscesses, pyogenic abscesses and genital sores. He believes that the low surface tension of such a solution of soap, whereby it penetrates quickly into all crevices, greatly enhances its value. The results of Renaud's work, taken together with the fact that reference books make no reference to the germicidal properties of soaps, seem to render desirable a brief review of recently acquired knowledge of this subject.

Lamar[2] showed that sodium oleate was strongly bactericidal against pneumococci and streptococci. Reasoner[3] demonstrated that soap has a germicidal and solvent action on *Spirochaeta pallida*. Nichols[4] became interested in the subject on account of the possibility of the spread of respiratory disease by contaminated eating utensils during the World War. He found that ordinary soap solutions (about 0.5 per cent) used in washing mess kits destroyed pneumococci, streptococci and influenza bacilli.

Soon thereafter, I[5] undertook a more thorough investigation of the whole subject, beginning the work with chemically pure compounds. The work with the chemically pure compounds need not be repeated here, other than to say that the results obtained with commercial soaps agreed with the results anticipated from the knowledge of the chemically pure compounds.

The effect of six representative soaps is given in the table, the killing strengths for two and one-half minutes at 20 C. being recorded and compared with that of phenol as a control germicide under the same experimental conditions.

The table indicates that all the soaps possess marked germicidal action against the common organisms giving rise to respiratory infections and against gonococci. It is also seen that it is impossible to stress the virtue of any particular soap. For this reason it has not seemed necessary to name the brands of commercial soaps used in the experiments.

The significance of the fact that soap concentrations of from 1:80 to 1:1,280 destroy bacteria is readily appreciated when it is realized that the concentration of soap in an ordinary thick later used in hand-washing is in the neighborhood of 1:12. Moreover, it was shown that the activity of soap was at least doubled when the temperature of the water was increased to 35 C.; that is, to about body temperature. And the activity was still further enormously enhanced when hot water (45 C.) was used. The latter effect was, of course, partly the result of the heat.

These results all indicate that the through washing of the hands with soap suffices for the destruction of streptococci, pneumococci, meningococci, gonococci and diphtheria bacilli. Influenza bacilli and *Spirochaeta pallida* are also to be included in this group as a result of the work of Reasoner and Nichols. These micro-organisms will also be destroyed by the hot

*Reprinted from Journal of A. M. A.

soapy water used in washing dishes. These remarks are based on the purely bactericidal action of soap,

Killing Strength of Various Soaps in Two and One-Half Minutes' Exposure at 20 c.

Soap	Organism: Pneumococcus	Streptococcus	B. Diphtheriae	Meningococcus	Sonococcus
White floating	1:320	1:320	1:640	1:640	1:1,280
Perfumed toilet	1:320	1:160	1:640	1:640	1:640
Brown bar (laundry soap)	1:320	1:80	1:640	1:640	1:640
Sapo mollis (U. S. P.)	1:160	1:160	1:640	1:640	1:640
Coconut oil	1:320	1:320	1:320	1:640	1:1,280
Olive oil	1:320	1:160	1:640	1:640	1:640
Phenol (control germicide)	1:50	1:50	1:100	1:100	1:100

and this effect in actual practice is, of course, supplemented by the mechanical removal of bacteria.

It was further found that the germicidal action of soap was greatly depressed by the presence of albuminous material such as serum. This property is possessed by practically all germicides. For instance, I[6] have shown that mercurochrome-220 soluble not only ceases to be a germicide when added in ordinary concentrations to fresh defibrinated blood but actually interferes with the germicidal functions of the serum and leukocytes. However, I treated several rabbits infected with virulent pneumococci by subcutaneous and intravenous injections of soap solutions. The treatment did not have the slightest effect on the infections.

Larson[7] and Davison[8] have shown that soaps have a definite effect in neutralizing bacterial toxins. Renaud also believes that this property supplements the germicidal action of soap when used in the treatment of wounds.

As sodium oleate is the least irritating of the soaps, Renaud's choice of it in perference to other soaps is unquestionably to be commended. It is easily obtainable in powdered form. Sapo (U. S. P.) will probably answer the same purpose, being prepared exclusively from olive oil and consisting therefore of about 75 per cent. of sodium oleate.

Conclusion

Soaps are strongly bactericidal against pneumococci, streptococci, meningococci, gonococci, diphtheria bacilli, influenza bacilli and *Spirochaeta pallida*. Their activity against these organisms compares favorably with that of many of the recently synthesized chemicals. When properly used for cleaning the hands or for the washing of eating utensils, soaps are undoubtedly potent factors in preventing the spread of diseases due to these organisms. The action of soaps as germicides is, however, limited by the fact that they do not destroy staphylococci and typhoid bacilli.

Renaud has recently found 2 per cent. solutions of sodium oleate beneficial as an irrigation and wet dressing for ulcerated surfaces.

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Souci, or Marigold

(*Continued from page 28*)

The marigold is regarded as having stimulating, sudorific and emmenagogic properties. In fact, it is considered by many authorities to be highly efficacious when applied in the matter of regulating the menstrual flow, and its wide use for this purpose helps to maintain a steady demand on the French market.

Infusions are made of the flowers or the buds, this infusion being highly recommended by the French pharmacist.

In the country districts of France the marigold is also used against warts, corns, or callous conditions of the feet, making this a highly popular remedy among the French peasants.

The petals, dried and reduced to powder, are used to falsify or adulterate saffron powder. Macerated when still fresh, then broken up and pressed, the petals produce a juice or liquid that is rather widely used for the purpose of coloring butter and allied products.

Labeling Lotions

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thing", but that he doubted that the fundamental difficulty would be reached; that the afflicted person would have to stop writing and rest for a while; that he did not consider the claim for counter-irritants in such a situation to be accurate.

The Food and Drug Administration has seized a number of preparations for external applications, as indicated above, in the course of its work on specific projects. One seizure involved a so-called "all healing" ointment, which was labeled for a great variety of wounds, sores, ulcers, eczema, etc. This was said by the department to be made up of petrolatum, wool fat, zinc oxide, boric acid, phenol, sulfur, tar oil, menthod, camphor, and essential oils.

Another seizure involved a carbolized witch hazel ointment and an alleged antiseptic healing ointment. Their make-up and the claims made for them were very similar to those involved in the above case. A third seizure involved a preparation made of linseed oil, turpentine, camphor and phenol, as to which the labeled claims covered a page and a half of closely printed matter touching all sorts of skin troubes, irritations, sores, etc.

Then there was an alleged antiseptic wash composed of water, boric acid, camphor and traces of alkaloids. There have been various other cases involving alleged healing ointments, salves, and so-called soaps, which did not come up to the Department specifications as to formula and/or went beyond the claims approved by the Department.

Ewing Galloway

Plaza Prado, the Fifth Avenue of Guayaquil, has a drug store as shown on the right

Selling Drugs to Ecuador

By Wilbur T. Gracey

HALF of the population of Ecuador is mestizo—mixture of the original Spanish settlers with the natives—the balance largely Indians.

While the per-capita imports are low—only about $7.10—they are considerably higher than Venezuela or Colombia. Naturally, buying is confined principally to staples, but as few medicines are manufactured locally and are considered necessities, there is always trade for our products. Toiletries come under the general heading of luxuries, and while the sale is confined somewhat to the better classes, the trade is growing each year. It is estimated that the annual consumption of medicinals approximates $200,000 while toiletery sales are about $100,000 additional.

Tariffs, which are somewhat high, have been placed on imported goods, to encourage local production, but these have not up to the present had a very far reaching effect. Estimates show that total manufacture of medicinals does not exceed $50,000 per annum, and production of toilet goods is unimportant.

The use of toilet goods is not as general as in most other Latin American countries, largely due to the fact that they have not been exploited to any great extent.

Ecuadorian women are partial to powders, perfumes etc., prefering those with light odors, which is somewhat unusual as in most Latin countries the more pungent ones are most in demand.

The men of Ecuador do not use perfumes, or hair tonics containing perfumes, as generously as in some other places, seeming to prefer West Indian bay rum.

Reliable statistics from Ecuadorian sources are not available, but it is estimated that approximately 60% of the medicinals sold in the country come from the United States, and approximately 30% of the toilet preparations.

France holds the premier position in the latter line, with Spain, Germany, Italy and the West Indies supplying the balance. French and German colognes retail for about half the price of Ameerican goods, but in such products as creams and dentifrices, shampoos and shaving soaps we practically control the market.

Shaving soap is largely used for shampooing. The popular hair tonics are bandoline and the French quinine products, with bay rum the universally used hair lotion amongst the poorer classes.

While drug products are sold almost entirely through the wholesale and retail drug stores, toilet preparations are handled usually through local manufacturer's agents, and this procedure seems the best for this market.

The latest statistics of our government give the following exports for the year 1929.

Quinine sulphate	$1,625
Milk of Magnesia	4,836
Castor oil	842
Cod liver oil	364
White mineral oil	859
Biologics for animals	3,036
Biologics for human use	5,154
Glandular products	2,040
Veterinary products exclusive of biologics	12
Medicinal and chemical preparations for dentists	83
Plasters	1,313
Linaments	1,742
Salves and ointments	7,450
Other medicinals for external use	5,479
Tonics	30,580
Fluid extracts	530
Cough and bronchial preparations	1,050
Other medicinals for internal use	49,493
Other non-coal-tar medicinals and pharmaceutical preparations	2,282
Disinfectants, deodorants, germicides, antiseptics and similar preparations	1,590
Petroleum jelly	1,292
Other acids and anhydrides	849
Glycerin	54
Toilet or fancy soap	8,392
Shaving soaps	467
Perfumery and toilet waters	3,855
Dental creams	5,768
Other dentifrices	279
Talcum powder	5,401
Face powder	947
Compacts	159
Bath and other toilet powders	225
Cold creams	669
Vanishing and other creams	1,173
Rouges lipsticks and cosmetics	1,201
Other toilet preparations	5,218

Prepared medicines cannot be imported, or sold, in Ecuador except by registered drug stores, and medicines with narcotic or alkaloid contents require special import permits secured from the chief of police. There is no restriction on alcoholic content.

Pharmaceutical specialties, or patent medicines, are understood in Ecuador to be all medicines offered for sale, closed and put up in uniform manner with label and printed wrapper. On the label and wrapper must be stated the name of the medicine, name and address of manufacturer and formula.

Specialties introduced into the country for the first time, before being placed on sale, must be presented to the director or sub-director of sanitation with a petition. If it should be necessary in the judgement of the sanitary authorities to make a chemical analysis, said analysis has to be made at the expense of the interested parties.

The importation of drugs, chemical products, specifics, opotherapic preparations, serums, vaccines and antitoxins is permitted only by apothecary shops, drug stores, hospitals, asylums, clinics, boards of health and by industries—the latter only when such products are necessary for the industry. Industries are required to ask for a permit from the director or sub-director of sanitation whenever they wish to import any chemical product needed in their establishment.

It must be remembered that the coastal regions of Ecuador are very unhealthful, with malaria not only universally repvalent but deadly. The result is a large call for quinine products. Other prevailing diseases are dysentary, tuberculosis, and all varieties of sexual diseases. The cities, as a rule, have faulty municipal sanitary systems or none at all. Prepared medicines are universally used, especially by the poorer classes, as notwithstanding the low doctor's fees, the people depend on proprietary products and will only consult a physician in extreme cases.

While local production of medicinals is small, almost all foreign medicinal preparations having a wide demand are imitated by local producers. Locally prepared medicines follow the French and American formulas as nearly as possible, and while specifics are on the market for all of the diseases mentioned, they are made under local names, and do not usually counterfeit imported articles.

The Indians in the interior still depend largely on the herbal remedies of their local medicine men.

Practically all locally manufactured products are made from imported drugs, except some crude products indigenous to the country such as cinchona bark, cascarilla and sarsaparilla.

Practically all imports come through the port of Guayaquil, and sales are made either direct to druggists, or through local agents appointed by foreign firms, who canvas the trade from time to time. The more important druggists have established wholesale

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Pharmacopoeia Processes

The Food and Drug Administration states its position with references to processes of manufacture given in the U. S. P. with particular reference to Milk of Magnesia.

IF A medicinal preparation is identical with that described in the U. S. Pharmacopoeia, the Food and Drug Administration does not concern itself particularly with the process by which the product was evolved, unless the method of manufacture were indicated on the label. This, in substance, is the position of the U. S. Department of Agriculture, in connection with the controversy that has arisen with regard to milk of magnesia. It is the belief of Department officials that what the public is concerned with is the product itself, not the method by which it is produced.

The milk of magnesia question was discussed by Drug Markets representative with various Department officials, beginning with Walter G. Campbell, Director of Regulatory Work. Mr. Campbell had not long previously issued a statement expressly declaring that milk of magnesia on the market was approved. He did that, apparently, by way of answer to statements published concerning Phillips Milk of Magnesia. Asked about his statement and about certain technical questions that have been raised in connection with the controversy on the subject, Mr. Campbell replied that his statement had been based on information from A. G. Murray, Senior Chemist, of the Office of Drug Control, and from other department experts. The inquirer was referred to them. To Mr. Murray, who was acting head of Drug Control in the absence of Dr. J. J. Durrett, Chief, who was indisposed for a few days, a brief statement on the situation was submitted for comment. That statement was substantially as follows:

The Pharmacopoeia specifies only one method of manufacturing milk of magnesia. That is the original Phillips method of precipitation of magnesium hydroxide by the use of epsom salts (magnesium sulphate) and caustic soda. This method is also used by some other manufacturers. On the other hand, a certain large manufacturer starts with magnesium chloride and caustic soda. A large number of manufacturers start with only two raw materials—that is, magnesium oxide (magnesia) and water. It is believed that they base their authority for thus varying from the Pharmacopoeia on the 5th paragraph appearing on Page 1 of general notices of the Pharmacopoeia. That paragraph permits deviations in detail from the official process, provided the finished products conform to the standards of the U. S. P. It is pointed out, however, that some people in the trade do not believe that deviations in detail of process means changing the entire method of manufacture and means starting with entirely different raw materials. There is the condition to be considered that starting with magnesium oxide and water rather than with caustic soda, epsom salts and water would at once eliminate the possibility of several impurities being present in the finished product. However, Phillips seem to base their contention on the fineness of the particles which they claim are colloidal under the old process as compared to crystalline under the later method.

On the basis of the above, Mr. Murray was asked how the Department arrived at giving this other product a clean bill of health. He replied as follows:

"We have always considered the proviso in the 5th paragraph of general notices of the Pharmacopoeia to mean that any change in the actual process of manufacture is permitted if the final article is identical with that described in the Pharmacopoeia. The thing the public is concerned with is the article finally furnished. We can not conceive that it is of moment to the public how the product is manufactured if it does not differ from the official article.

"We have no information about how an article is manufactured, as a general rule, I do not know officially. I have no information other than what has been seen in published statements concerning milk of magnesia. We only take the finished product as we find it on the market.

"If manufacturers should say on their label that their milk of magnesia is prepared according to the exact details of the Pharmacopoeia, then, if it could

be shown that the product was prepared in some other way, the product would be deemed to be misbranded.

"If the consumer wants a product manufactured in a certain way, whether or not his desire is based on actual facts or on mere caprice, and if the manufacturer says to him, 'I am furnishing you with that particular article made in that particular way', then the food and drugs act demands that the product be that particular article made in that very way.

"We have made no inquiry as to how milk of magnesia is manufactured. There has been no complaint from trade sources to the Department about the use of different methods in making this product.

"The Food and Drug Administration does not inquire into the extent to which deviation occurs under that provisio in the 5th paragraph of general notices of the Pharmacopoeia. In other words, we do not attempt to draw any line as to just how far a manufacturer can deviate.

"If the Pharmacopoeia says manufacturers can deviate from the process specified in the Pharmacopoeia, then it is up to the Revision Committee to limit the manufacturers, if the committee wishes to do so. It is not the function of the Department of Agriculture.

"All good milk of magnesia consists of magnesium hydroxide suspended in water. You can get such a suspension in various ways, of which the method prescribed in the Pharmacopoeia is one. If sodium sulphate should develop to be present in the product made by one process, then that can be washed out, and you are O. K. If sodium sulphate is not washed out then you have not a U. S. P. product. That is true of the method of using epsom salts in making milk of magnesia as provided in the Pharmacopoeia. Another method of manufacture eliminates the possibility of sodium sulphate, provided you start with pure water and pure magnesium oxide.

"I have outlined above the general rule applying to drugs and medicines. Of course there are cases in which it is necessary to inquire into methods of manufacture. I may mention one of them. Methyl salycilate can be made synthetically or it can be obtained from wintergreen or from birchbark. Chemically, the product is the same thing. If it is sold as methyl salicylate no inquiry is made as to its source. But if it is sold as birch oil or as wintergreen oil, then it must come from the sources indicated, namely, wintergreen, or birch."

Dr. Frederick J. Cullen, senior medical officer of the Office of Drug Control, was asked about the practice of the Administration with regard to the labeling of such products as milk of magnesia, which may be produced by various processes.

He replied that it would depend upon the bacterial and chemical analyses of the products found on the market. If the analyses indicated that the product was satisfactory, according to U. S. P. standard, it would not be molested.

"Milk of magnesia is nothing but calcined magnesium with water," said Dr. Cullen. "It might be possible that one method would make a finer product. But at the same time the chemical analysis of the product made by different methods might be identical"

It has been stated by a representative of the firm responsible for starting the milk of magnesia controversy that products analyzed by them were far from satisfactory. But these products, it was explained, were the products made by retailers themselves, who, according to the statement, merely take the magnesia sold them and shake it up with water. When this situation was explained to an official of the Food and Drug Administration, he smiled and said, "Why that is a local product which does not enter into interstate commerce and thus it does not come under our jurisdiction."

The method by which the large manufacturers of milk of magnesia who use the magnesia and water process proceed is to introduce these products into a colloid mill. Thus a true dispetsion is effected and the magnesia is hydrated in a true colloidal condition, it is said. That this method is much cheaper than the old Epsom salts and caustic soda method is explained by the fact that no large mixing tanks are necessary, nor is any washing out of impurities such as excess of one of the starting materials and sodium sulfate necessary.

It is thought by some that the method of manufacture should be deleted from the Pharmacopoeia or optional methods should be given so as to clarify the situation. As a matter of fact there are a great many products of a chemical nature in the Pharmacopoeia for which no methods of manufacture are given. So long as the product is a definite mixture of chemical compounds all of which are subject to accurate chemical analysis, no particular method of manufacture must necessarily be followed, it is explained.

Is Manganese a Tonic?

(Continued from page 28)

the subject is completed. We have simply called the attention of manufacturers to the situation."

Some days later, when Dr. Durrett had returned to his office, the manganese question was discussed with him.

"We accept statements made that manganese has tonic action," said Dr. Durrett. "It is a matter of not universal agreement, of which we are aware. Manganese has been regarded as having tonic properties. This has been disputed by some, however. We have not investigated fully and don't know yet which is right and which wrong.

"Manganese has been given most often with iron, quinine, or other tonic drugs. It has very rarely been given alone for tonic purposes.

"The present status of medical knowledge on the subject is that we do not feel we want to take the stand that manganese is useless.

Cost Reduction Through Wage Incentives

Mr. Peehl explains a system used satisfactorily to reward energetic employees no matter what kind of work they are performing. The system, states Mr. Peehl, is applicable to plants employing 100 people or more.

By Carl F. Peehl*

ONE of the quickest ways to reduce operating costs is to employ a wage incentive system in the payment of factory workers. Wage incentive plans have come into disrepute, it is true, because of the amount of clerical work involved, the ease with which old systems might be "rigged", and through a fallacious belief that a wage incentive plan is applicable only to very large plants. Some systems have fallen of their own weight. But the one described hereafter has been successfully applied in the cosmetic and drug industries.

In this system a point represents four-fifths of the amount of work a normal worker can turn out in a minute of time without over-exertion and irrespective of the nature of the task. The standard number of points set for each task is determined by time study analysis. The number of points which a worker produces is a measure of his efficiency. This rating is comparable to that of all other workers in a plant regardless of differences in the nature of the work. Group standards and group ratings can be developed for any kind of work that is essentially of a group character, but the number of individuals in a group is always as few as may be practical for the application of the point system.

Stress is laid in the discussion of this system on the universality of the point. It is to be noted that as a yard-stick applicable to the work of an entire plant the point system is in effect a unit of effort rather than a unit of definite work. The diversity of tasks within the plant makes it necessary to establish a specific point standard for each type of operation. A comparison of point system standards is, therefore, not a comparison of work done which might require very different grades of skill and may result in units that are quite diverse, but is a comparison of the effort required to do the tasks set. On the assumption that the point standards for different operations have been equitably set, the system furnishes a measure by which one may compare not only the point performance of different workers on the same job, but those of workers on different jobs, and of different departments of the plant with one another.

How Earnings Are Computed

An illustration will be helpful towards understanding how the plan operates. Let us assume that a girl operator fills 50 tubes per minute. Translated into the terminology of this system, an operator who fills 50 tubes per minute is credited with one point. Let us say that each worker is paid at the rate of 75c per 100 points. If, then, during the day (10 hours) an operator fills 30,000 tubes, she received 75c × 6 or $4.50. If another operator fills 35,000 tubes, she would receive 75c × 7 or $5.25.

Because of the common denominator used as the basis of comprehensive labor control records, and

*Marinello Company

because the point makes possible the development of an equitable incentive plan for supervision and indirect labor, as well as direct workers, much more effective departmental team work is developed which results in increased production per-man-per-hour, lower costs, and increased earnings of supervision and indirect as well as direct labor. Special incentives for maintaining and improving quality of workmanship are also established in accordance with the requirements of each department. The point ratings, (efficiency) of the various departments in the factory can also be compared as necessary; budgeted allowances are made for time consumed by work that may not lend itself to the setting up of point standards because of the inapplicability of time studies.

The efficiency of supervision is rated and bonuses are paid for supervision according to these efficiency ratings. The total amount of bonus paid for supervision and indirect labor in limited to 4½% of the combined earnings of direct workers who produce individually at a daily rate in excess of 60 points per hour; but such bonus is not deducted from, nor taken out of the earnings of the direct workers.

It must be remembered that the extent to which the point system introduces a satisfactory measure for comparing output of workers in different occupations depends upon the degree to which the various jobs are capable of having criteria set up for standard making purposes. However, success has been achieved in applying the point system to such highly diversified work as hand composition in a jobbing print shop, and to the manufacture of ornamental chandeliers produced in quantities, ranging from one to five of each particular design. The point system can be operated independently of the rates of pay for the various tasks in a plant, as the point standards are established on a time basis instead of on a money basis. This permits of complete flexibility in applying the point system to all classes of labor regardless of the difficulties of the job and experience and training necessary for each job.

Method of Installation

This plan must be installed by a trained production engineer who remains at the plant for the installation period. He remains until the system is in operation. This engineer sets the standards in the various departments. His job is to train time-study men (one or more) in the methods of setting accurate standards, and clerical help in making up reports and payrolls. The work of installation progresses very rapidly with part of the plant operating under the point system after a period of a month or six weeks.

Through this system the employees—both direct and indirect—increase their earnings, and the company also reduces its unit labor costs. The principle adopted for the employees is to cerate an incentive for them to produce more in a given time. This does not necessarily mean that they must work harder. Such things as planning the work ahead of the operator, starting work promptly in the morning, seeing that supplies are on hand and reporting waiting time, are some of the methods used to reduce lost time to a minimum.

Usually in every factory there are certain operators who do the bulk of the work. The other operators or workers are looking on. The point system eliminates the observers and all waiting time. The money formerly paid out for this work is divided between employer and employee.

The indirect workers (handlers, repair men, foremen and supervisors) also are included in the wage incentive plan. It is thorugh the full co-operation of all of these workers that the direct workers are able to produce more without placing themselves under a strain.

Installations in Operation

The writer has personal experience of an installation where one department has increased its productive work 100 per cent. within six weeks without increasing the number of employees. This happens to have been a Day Work plant. Similar results have been accomplished in plants operating under piece work.

Charles G. Merrell, President of the William S. Merrell Company, Manufacturing Pharmacists, Cincinnati, Ohio, has made the statement that he has been able to save $50,000 a year in his payroll through the use of the point system.

This saving was not accomplished by new equipment, as the point system does not necessarily change present manufacturing methods. All changes are made in labor, eliminating waste and planning systematically. There are numerous other installations that have been made in the East and West where the same story can be told as was quoted above.

Cost Control

This system also ties in with cost control. Through the various forms and reports that come in to the management daily a very accurate labor cost system can be adopted. These reports give you waiting time, break down time and costs on products. Complete instructions on cost work are given to the client for his use.

Quality Control

One of the chief advantages of the point system is the quality control. Not only has it been found from experience that quality is not affected, but in most cases the quality of the product has improved. The control is handled by having daily quality control reports submitted to the management in those departments where it is thought necessary. It is sometimes necessary to place penalties on errors and spoil-

(Continued on page 40)

Why Bottles Are Washed

Drug Manufacturers state their convictions as to why they follow this practice which entails additional expense.

BOTTLE washing as applied to the drug manufacturing industry is a form of insurance against claims for damage or business lost through careless handling, it was asserted in the article, "When Bottles Are Washed", which appeared in our May issue. That article went on to point out that examination of supposedly clean containers had disclosed dirt, dust, cinders, paper, grease, glass particles, etc., as well as bacteria and mold. The two latter factors, of course, result in spoilage with its subsequent financial loss, while the presence of foreign matter leads to injury or harm to the consumer with damage suits and loss of consumer good-will and confidence.

Since the publication of that article, with its description of present day bottle washing methods, we have had submitted to us by a prominent manufacturer of this type of equipment, a group of statements from manufacturers in the drug trade which show that they are keenly alive to the importance of this phase of their plant operations. There appears to be a wholesome unanimity of thought on this on this subject, but, curiously enough, it takes a different turn from that suggested by the article in the May issue of Drug Markets. That article, as has been pointed out, took a rather negative attitude emphasizing the prevention of possible mishaps. The reactions in these letters, however, are of a positive nature and drug manufacturers evidently consider bottle washing a self-evident necessity, in complete accord with their close control of operations throughout so that they may secure the highest degree of purity of product.

According to Joseph C. Windbiel of Mead Johnson & Company, "We spend a considerable sum of money in our technical control and research in order to produce a sterile infant food. It would avail us nothing if we packed this product in a dusty and non-sterile can. Hence the imperativeness of washing, sterilizing and thoroughly drying our cans. As to our bottled goods, sanitary practice dictates the necessity of washing the bottles. Besides that, our washing must remove molds and spore formers to inhibit their contaminating the packed products.

Following the same line of thought, Charles G. Gery, Henry K. Wampole & Company, says that, "To exercise as much care as we do in the selection of our raw material, in the testing of same for purity, in the compounding of our formulae, and then be careless as to the cleanliness of our containers, would, in our opinion, be inconsistent, to say the least. Therefore, we have always made it a rule that all bottles used as containers for Wampole's specialties must be thoroughly washed, to insure the utmost cleanliness."

"Even new bottles," writes P. Fleet, of the C. B. Fleet Company, "contain a surprising amount of dust and dirt. We cannot imagine any firm putting up medicinal or food products in glass containers, even though they are new, without first washing the bottles." And E. F. Helbig, of Meyer Brothers Drug Company, says that, "While we use only new bottles for our products, we believe it to be advisable to wash and rinse them, as more or less dust is deposited on the outside during transit or in storage. Some of this is likely to get inside the container as well, so we take no chances and wash every bottle we use to insure against contamination in any way."

W. Hollander, of the Maryland Pharmaceutical Company, writes that, "It seems to us self-evident that a medicine should be put out in the cleanest of clean bottles," and J. Y. Lund, of the Lambert Pharmacal Co., adds that, "We feel that cleanliness in plant, equipment and package is of vital importance in successful factory operation. This is particularly true in the pharmaceutical industry where purity of product and accuracy of manufacturing is a necessity."

The situation is summed up by C. S. Purcell, of Joseph Burnett Co., who expresses the prevailing opinion among manufacturers as follows: "At first glance it might seem that the washing of glass bottles, as received from the factory, is unnecessary; that it is, in fact, just a waste of money. We do not agree with this view. Glass bottles are often only apparently free from dirt. Glass dust is invariably present, due to the rubbing of one bottle against another in transit. Minute fragments of glass, too, are apt to find their way into glass bottles. For these reasons it has always been our policy to subject our bottles to a thorough washing, both inside and out."

Selling Drugs to Ecuador

(*Continued from page 34*)

departments and maintain traveling salesmen who cover the interior places. Druggists usually carry considerable stocks in order to supply their clients immediately, as length of time of shipments in transit is long, despatch through the customhouse slow, and long credit terms become a necessity. These are usually from 60 to 90 days.

Very often manufacturers in order to secure trade have to start by shipping on consignment, and then create a demand by local advertising. It is a custom to distribute samples to local physicians, but not to the general public, though European firms have done this to a small extent with unsatisfactory results.

The French Code is official in Ecuador.

In the line of toiletries the Ecuadorian people do not seem to be impressed so much with fancy packages as are some other peoples of South America, being more interested in the contents of the packages. Cheaper grades of perfumes are usually in plain or frosted bottles, the shape varying with the grade and price.

More expensive perfumes—especially those from France—come in ornate packages and bottles, but as a general rule the containing boxes are not fancy and the silk lined case does not seem to be in demand.

Wrappers of toilet soaps seem to be a deciding factor in securing sales. American brands are very popular and for this reason some of the foreign brands imitate our products.

Where directions on labels are necessary, they should be in Spanish, but it is preferable that the name on the label should be in French or English—especially in the case of perfumes or powders—as this qualifies them as imported goods and as a result they command a more ready sale. Labeling of goods in Spanish usually brands them as of cheaper and inferior quality.

Considering the economic conditions in the country serums and vaccines are used to a surprising extent. They are sold in most of the important drug stores, and constantly used. Some of those most widely used are Gonococcic vaccine, diptheria antitoxin, tetanus antitoxin, smallpox vaccine, colon bacillus vaccine, pertussis mixed vaccine, mixed influenza vaccine, staphylococcic vaccine, staph-acne vaccine, typhode vaccine, diptheria toxin-antitoxin mixtures, sterile culture media and diagnostic tuberculine. Serums constantly needed are those for dysentary and bubonic plague, two scourges of the coast. German and American serums are both popular, preference being determined by price. Bottled serums are preferred used with a special hypodermic needle. There are special regulations regarding importation of these products, but no duties.

Veterinary preparations are also used by the progressive stock raisers to a certain extent. Many of these have ample capital to purchase such preparations. All of the common cattle, hog, sheep and goat diseases are prevalent in Ecuador, anthrax, blackleg, hog cholera, calf diarrhea, horse influenza and worms being the most prevalent. The Department of Agriculture is endeavoring to introduce modern methods of disease prevention.

It is interesting side-light on Ecuadorian customs to note that cologne water is considered a necessity and pays a merely nominal import fee, while such products as rouge, lip sticks etc. are assesed at a high rate as luxuries.

Cost Reduction

(*Continued from page 38*)

age of work, with a bonus to a foreman to keep errors within a fixed percentage. When workers are on the point system they pay stricter attention to their work and in that way are able to turn out better quality. They also have the knowledge that they will not be paid for work that is not up to standard.

Essential Measures of Point System

In the last analysis, the point system contains the very desirable simplicity of piece work, while at the same time the point standards are constant as they are expressed in terms of time and, therefore, do not require continual adjustment to meet the ever-changing labor market. In addition, the point system has greater flexibility, a rating scale for comparing all work and departments, and an incentive for supervision and indirect labor. When it is stated that the worker's pay is directly determined by the number of points to his credit, this is another way of saying that the amount a man earns is directly proportioned to his output. In the case of the tube filler "A" who received $5.25 for 700 points as compared to the operator who received $4.50 for 600 points, the 16-2/3% difference in total points produced is the measure of the greater output of one worker over another.

The point system is adaptable to plants having one hundred employees or more.

Mucidan preparations are characterized by the fact, that formaldehyde and glycerin are contained in the same in the soluble form, this being attained by the aid of potassium sulphocyanide. The presence of the sulphocyanide radicle not only has the effect of preventing the formation of an insoluble formaldehyde-gelatine compound, but it also counteracts the irritating and tanning effect of the formaldehyde. The sulphocyanide must be present in excess to accomplish this. Mucidan preparations come on the market in the following forms: tincture of mucidan (protected in German Patent No. 390,698), mucidan tablets, mucidan ear spray (for treating inflammations of the middle ear). Some of the preparations are used for the prophylaxis and treatment of colds. These preparations are manufactured by Kali Chemie A. G., Rhenania-Kunheim Division.

Acids in Cosmetics

Beneficial results are obtained when certain acids are present in cosmetics in given quantities. However, selection and control concentration of the acids are essential.

TOILETRIES and cosmetics are often called medicinal products that cleanse, cure skin troubles and in general improve the health of the skin and of the body in general. The cosmetic industry has in fact expended much effort in educating the general public, and the political forces of various States, to realize that cosmetics are not merely luxuries, to be taxed whenever the opportunity arises, but necessities of daily life, to be made readily available to the people at large.

If toiletries are really medicinal agents in the broad sense of the word, then it is highly important that they do not contain agents that may injure the skin of the face, hands or other parts of the body to which they are applied and that they are properly made so that their efficacy is maximum. This should be and is the aim of every manufacturer of cosmetics who has his own interests and the interests of his industry at heart. It therefore follows that the use of accurate methods to determine the full suitability of cosmetic raw materials and of the finished product is a high important matter to the manufacturer.

For some years past, chemical and allied industries have adopted the pH method of determining the acidity or alkalinity of raw materials, reagents, products of manufacture and the like. This method has supplanted the older and more cumbersome methods, and has perhaps not found as much use as it should in the cosmetic industry. It is a very important matter to the cosmetic manufacturer, for one certain way of injuring the skin is to use a cosmetic which has too acid or too alkaline a reaction.

It is not necessary to go into a discussion at this point of the actual methods and apparatus that are used in the determination of the pH coefficient. There are a number of apparatus on the market that can be used for this purpose and that give good results. The pH coefficient may be determined by colorimetric or electrometric methods. Various indicators, such as methyl orange and phenolphthalein may be used along with comparative solutions.

An interesting article has appeared on this subject by H. Janistyn in Der Parfuemeur. In this article Janistyn calls attention to a series of experiments carried out by Schade and Marchionini (see Deutsche Parfuemeur Zeitung 1930, number 23). These investigators found that the normal skin is surrounded by acid films of high pH value, namely 3.0 to 5.0. This acid film is of great importance in combatting the action of bacteria and preventing their entrance into the body. Furthermore, it also indicates that a certain degree of acidity is necessary for the healthy life of the skin. It also appears probable that the action of the acids, which is enhanced by the solution of the perspiration on the skin, is further strengthened by other substances, such as cholesterin, vitamins, anit-bodies, etc.

The irritating action of good grades of toilet soaps can therefore be readily explained by means of these facts, for the soap has a strong action on the acid film on the skin.

These new developments place the use of acidic cosmetic products in a different category than heretofore, and the use of acids in making cosmetics has become of great significance. It is of course true that all kinds of acids cannot be used indiscriminately. Acids recommended for this purpose, include anisic acid, formic acid, benzoic acid, butyric acid, citric acid, acetic acid, gallic acid, tannic acid, glycerophosphoric acid, camphoric acid, lactic acid, salicylic acid, tartaric acid, cinnamic acid, boric acid, iodic acid, phosphoric acid and hydrochloric acid. Acid salts may also be used. The concentration of acids must be chosen in such a manner, that the active pH value is reached and the acids are selected in accordance with their other characteristic reactions.

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Great care must be taken to see that the proper pH coefficient is maintained in the preparation of acidic cosmetics. It is best to use acids that have been properly admixed with substances that contain the combined acid in suitable mixing ratio so that the action of the latter is manifested under most favorable circumstances. Thus for example a rather well-advertised mouth wash, recently introduced on the market, is composed, as is claimed, of 0.1 per cent. of chlorothymol (or chlorocarvacrol), 7.5 per cent. of glycerin, twenty five per cent. of alcohol, one per cent. of acetic acid of 36 per cent. concentration and 64.4 per cent. of water and aromatics. The important characteristics of this mouth wash is that it has a pH coefficient of 4.5, for at this degree of acidity it has been found that chlorothymol exerts its most potent antiseptic action. Nevertheless, when this preparation is used, the acidity of the solution is changed and hence the mouth wash does not exert the potent action that it should. It is best to use a mixture containing an ingredient that can compensate for the change in reaction caused by the conditions of use. For example in using a lactic acid medium, the improved product contains a mixture of lactic acid and sodium lactate. This has an acid reaction equivalent to pH of 3.7 and contains a high acidity reserve.

Experiments have been carried out to show the effect of using a preparation containing reserve acidity. Thus when an ordinary 100% lactic acid is used, the acidity is pH 3.7, while the acidity of the mixture of lactic acid and sodium lactate is pH 3.75. When the lactic acid is diluted to 50%, the acidity is reduced to pH 4.03, while the acidity of the mixture of lactic acid and sodium lactate remains almost constant, namely pH 3.74.

Organic Acids Beneficial

It is true that the strong mineral acids have an irritating action on the skin and penetrate deeply in their injurious action. This is also true of strong organic acids. On the other hand dilute acids, and particularly organic acids have a beneficial action on the skin. They stimulate the skin and promote the formation of callous. Dilute acids are used in the preparation of toilet waters and certain hair washes. The common practice consists simply in adding what is considered to be the correct amount. There is no real information available on what happens when these acids are used, or how much of the acid should be used. It is not known just what is the active concentration of the acid and the one that produces the desired results. Under such conditions it is better not to use acids for these purposes at all.

It is interesting that in using acid mixtures which contain reserve acidity, it is possible to use mixtures possessing a high total concentration, that is free and the combined acid. On the other hand when a simple acid preparation is used of the same strength, there is grave danger that severe injury to the skin will result.

It has also been demonstrated that the disinfecting action of the acid mixture containing reserve acidity is greater, for the reason that it is possible to work with high acid concentrations. Hydrogen is the strongest disinfectant. One gram of hydrogen in thirty million liters of water is sufficient to maintain nutrient media permanently sterile, in the absence of compounds that yield hydroxyl ions, for a shifting in the reaction from 0.8 x 10-7 gram (H) to 2 x 10-7 (H) is sufficient to prevent the growth of bacteria in the experiments.

The negative constituent of the strong acid plays a role only in so far as the absolute disinfecting or antiseptic powers of the acid become less, the higher the molecular weight of the acid. The weaker the acid, the more does the antiseptic and disinfecting action of the anion come into play. The antiseptic and disinfecting action is however also dependent on the nature of the non-dissociated molecule and on the lipoid solubility of the same. Bacterial growth is caused by the following concentrations of antiseptics: formalin one in 20,000 (for comparative purposes); phenol one in 100, formic acid one in 1,500; acetic acid one in 1,000, salicylic acid one in 500; sulphosalicylic acid one in 500 and picric acid one in 500.

Control of Bacteria

Experiments have also shown that pathogenic micro-organisms do not grow any longer in a medium which has a pH coefficient of 4.8 to 4.5, no matter what the nature of the acid used may be. Bacteria coli were killed in a solution of lactic acid plus sodium lactate of a concentartion of one in fifteen within a period of five minutes. Further experiments have shown that this preparation possesses sixty five per cent of the antispetic powers of ethyl alcohol. Tests have also shown that this preparation is effective in killing staphylococcus aureus, coli haemolyticum, streptococcus lacticus, etc., even when the preparation is used in a state of great dilution.

There is a great deal more to the question as to where acids can be used in the manufacture of cosmetic preparations. Their use is certainly indicated in the preparation of skin, mouth and hair preparations. Acid skin creams are found on the market. There are acid salve bases. Furthermore, such acids as citric acid, boric acid and the like are used in the preparation of hair powders. Acid toothpastes of good quality are also made.

It is also true that many cosmetic preparations need correction. Thus for example the use of pepsin in a toothpaste, which does not have approximately the correct pH value is entirely inactive, or nearly so. A toilet water is most active when it also has the proper pH coefficient. The use of acids in the preparation of compounded perfume products is also of importance, for the character of the odor may well be changed by the presence of acid.

(Continued on page 103)

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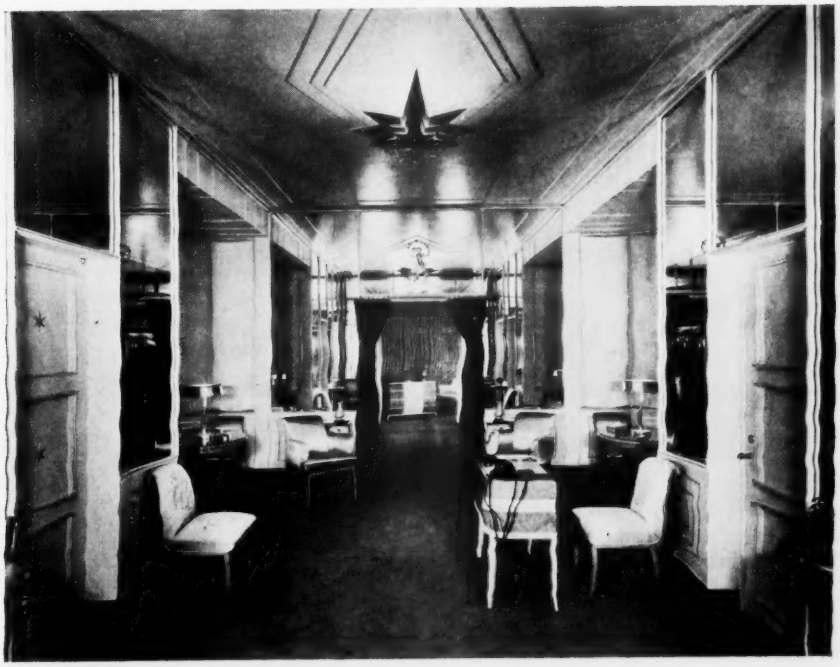
New Hudnut Salon



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Shaving Soap Manufacture

The proper constituents and the methods of combining these constituents to obtain desirable results are discussed by Mr. Chilson.

By Francis Chilson

SHAVING soaps may be divided into four types: hard, soft, paste and powder. Hard soaps are exemplified by the now passe cake, which used to accumulate slime in the bottom of elaborate shaving mugs, and also by the stick type of which the Williams shaving stick is a good example. The soft soaps or shaving creams, as they are usually called, are more widely sold than any of the other type. The "paste" (for want of a better name) type is basically a vanishing cream, popularized by Barbasol at the beginning and followed immediately by a number of similar, so-called brushless shaving creams. The powder type has not yet been popularized and is commonly employed in barber shops.

The cake shaving soaps are soda and potash combinations made from very high grade cocoanut-oil with sufficient triple pressed stearic acid added to give a solid body. Such soaps differ little in composition from high grade toilet soaps. Sometimes a small quantity of saponified rosin is added to facilitate lathering, and also, a small percentage of glycerine and gum—acacia or tragacanth—are incorporated to prevent too rapid drying out while in use. Confectioners sugar XXXX grade is often added to give the lather a sheen and to increase its cohesiveness. These soaps, when made in cake form, are plodded, cut into cakes and pressed in the same way that toilet soaps are made. When made into sticks, the soap is extruded in a plodder with a round orifice and then cut to required length.

Shaving creams are made from some of the following ingredients: cocoanut oil, triple or double pressed stearic acid, glycerine, water, sugar, potassium and sodium hydroxide—sometimes a small percentage of acacia or tragacanth are employed.

The following formula illustrates the relative proportions:

No. 1—Stearic Acid	85.5	lbs.
Glycerine C. P.	36.	"
Cocoanut Oil	15.	"
Water-Distilled	48.	"
No. 2—Alkali Solution:		
KOH 42° Baume	43	"
NAOH 42° "	6	"

Procedure:

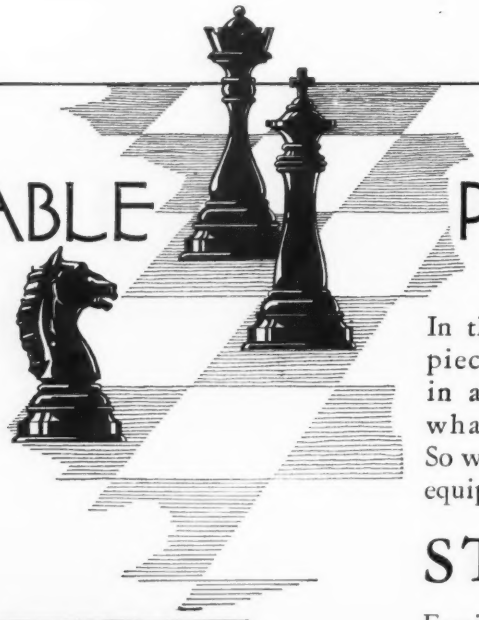
Melt stearic acid and cocoanut oil, add glycerine and water and heat to 175° F.

Make warm alkali solution.

Start mixer containing lye solution, then slowly run into it mixture No. 1, and continue mixing at slow speed for a few minutes after all of the No. 1 mixture has been added. By this time saponification will have taken place but the soap is not yet ready for filling. If a pony mixer is employed for the mixing remove the tank and allow the batch to set for two or three days, stirring it slowly with a paddle for a few minutes every three hours.

When first mixed, the mass is comparatively hard but after standing it will soften up and acquire a

VALUABLE PIECES....



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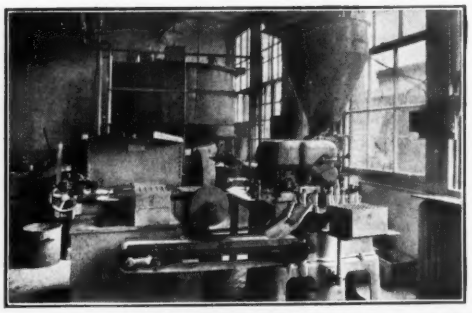

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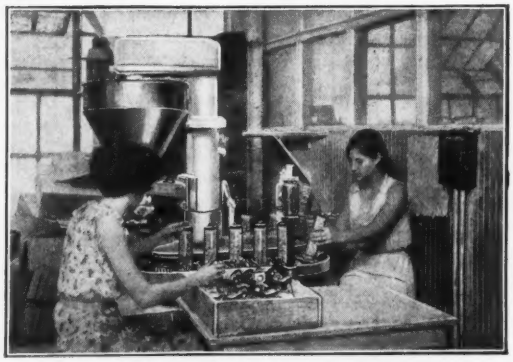
Drug Mills and Mixers
Alcohol Recovery Apparatus



STOKES Full Automatic Powder Filler and Capper

Write for catalog

FJS STOKES MACHINE COMPANY

Pharmaceutical Equipment Since 1895

5932 TABOR ROAD OLNEY P. O. PHILADELPHIA, PA.

sheen. Experience will tell when the soap is soft enough for filling—the period being variable owing to the effect of weather conditions and variations in room temperature.

Before filling, the soap should be tested with phenolphthalein solution as a precaution against excessive free alkali. Perfume should be added when the mass is soft and cold, although some manufacturers add the perfume as soon as the mass has cooled down to about 110° F. The colder the mass the better will the perfume be, but precautions should be taken, however, against rapid mixing when the perfume is being added in order to prevent incorporation of air. If the cream is to be colored, the color and the perfume should be mixed with a small quanity of the soap to form a base, which should then be added to the batch and mixed in.

Owing to lack of rigid laboratory control the results in making shaving cream often varies because old timers will add more cocoanut oil if the phenolphthalein test shows an excess of free alkali, and, if, in their opinion, the soap is a little too firm they will likewise add more water. The large manufacturers, however, are careful to standardize raw materials and compounding operations. If the compounding of the batch is carried out by the clock, the necessity for adjusting the batch before filling will be eliminated.

Effect of Consistency

The consistency of the cream has much to do with its effectiveness. It should not dry out too quickly and it should be stiff enough to hold individual hairs upright so that the razor will cut without dragging. If the cream is soft and sloppy the hairs will give slightly before the razor and decrease the efficiency of the cutting action. It is a moot point between chemists as to whether shaving creams actually do soften the beard in the limited time the lather is on the face. Some contend that such soaps do not contain sufficient alkali to do much softening in this limited period and that the value of the cream lies in its power to hold the hair upright, and also in its lubricating and soothing action. Whatever theory is right, it is definitely known that the smaller the bubble the greater will be the pressure of the enclosed air, because of the increased curvature of its surface. (Soap Bubbles And the Forces Which Mold Them, C. V. Boys, London, 1900). Thus, it would seem, that the smaller the bubbles the stiffer the cream, and, consequently, the more resistance will they offer to the movement of the hairs which they surround.

In large scale operation the melting tanks for the stearic, etc. are placed on the floor above the mixers or else upon a mezzanine, situated directly above them. After the cream has been mixed and perfumed, the batch is dumped into very large storage tanks equipped with slow moving agitators (5 rpm max.) in which the cream is allowed to mature. These storage tanks are in turn connected with the filling machines on the floor below.

The packaging of shaving cream in tubes offers no problem not already discussed in a previous article on tooth pastes. The equipment and procedure are identical.

Brushless Creams

The brushless creams are vanishing creams pure and simple, and are based on the beforementioned theory that shaving requires a firm mass to hold the hair in position. Some of them are generously rounded out with menthol to conceal the irritating effect of the cutting action of the razor. Actually vanishing creams are modified soaps containing an extremely large percentage of water. They are made usually from stearic acid, mineral oil, potassium and sodium hydroxide, water and perfume in the following typical combination:

Stearic Acid	20. %
Distilled Water	71. %
Mineral Oil	5. %
Anyhydrous Lanolin	2.55%
KOH	.75%
NAOH	.20%
Perfume	.50%
	100. %

Procedure:

The stearic acid is melted, and the lanolin, mineral oil and about one quarter of the water added. A solution is made of the NAOH and the KOH with the remainder of the water. The melted fats are gradually added to the alkali solution in the mixer and slowly agitated. When cooled down to about 110° F. the perfume is added as the batch is slowly mixed. After mixing it should be allowed to stand for twenty four hours, during which time the mass will be seen to pass through alternate phases of liquification and solidification. It will harden finally and is then ready for filling.

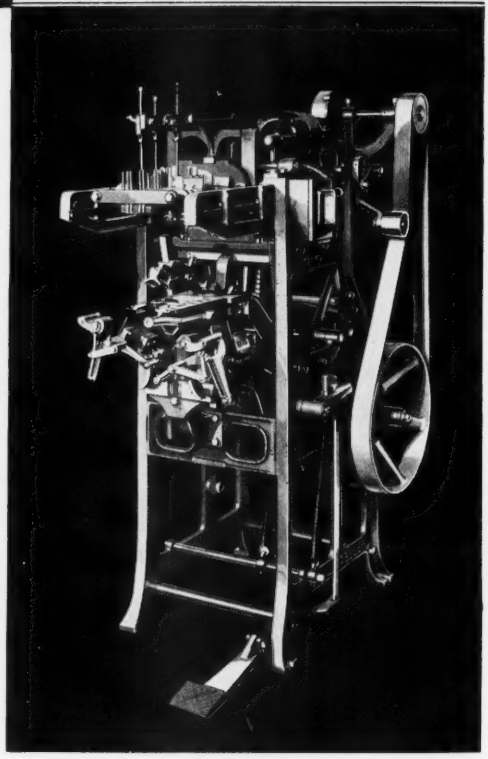
Again, the filling procedure does not vary from other forms of tube filling, excepting that the interior of the tube filler should be insulated against the corrosive action inherent in creams of this category. Similarly, the tube which is to hold the paste should not be made of metals susceptible to its action—aluminum for example—unless the tube is adequately coated with some insulating substance such as sodium silicate.

Shaving powders are made in exactly the same way as cake soaps, but instead of being formed into cakes, the mass is chipped, dried thoroughly and then pulverized. The filling of the finished powder may then be carried out in any of the auger or vacuum type filling machines. The packaging phase differs not a whit from the common procedure in filling powders.

NATIONAL LABELERS have labeled—

ED PINAUD'S HAIR TONIC AND OTHER PINAUD PRODUCTS

for over 10 years



WAY back in March, 1920, Pinaud's Laboratories bought two National Standard Labelers for labeling their famous Ed Pinaud's Hair Tonic.

These same machines are in use today after over 10 years of continuous satisfactory service.

National Labelers are built to "stand the gaff"—to produce neat, accurate labeling over a long period of years.

One prominent manufacturer is saving $2,346.00 a year with each machine. His packages are being labeled more accurately than before even though the speed of labeling has been trebled.

If you would like to see the complete report and analysis of the savings, a representative will be glad to call and go over it with you. He will also be glad to analyze your labeling problem and submit a recommendation with estimated savings for your plant. Address Dept. L-17.

THE LIQUID CARBONIC CORPORATION

O&J Labeling Machine Division

3100 South Kedzie Avenue · Chicago, Illinois

Therapeutic Novelties

By Dr. R. L. Mayer

HORMONE preparations are intended not only for the purpose of supplying a deficiency in the human system, but also for combatting diseases. In the latter case what is required is a hormone possessing certain distinguishing properties. It is, however, true that all the hormones act simultaneously on the various organs of the bodies. Thus for example adrenalin acts on the intestine, the peripheric circulation, the heart and other organs. However, in order to obtain therapeutic agents, with which it becomes possible to attain a certain definite physiological action, that is only a single of the aforementioned actions for example, and furthermore to be able to obtain this action in an intensive degree, experiments were made on hormones, which possessed a definite chemical composition. These experiments had for their purpose the production of substances, possessing particularly potent pharmacological properties, by effecting chemical changes in the molecule. Another purpose of these experiments was to suppress, if not eliminate altogether, certain undesirable by-reactions. The substances, ephedrin and ephetonin, belong to this class of preparations, in a certain sense. The firm of E. Merck in Darmstadt, Germany, which is responsible for the preparation ephetonin, has recently developed a new synthetic ephetonin compound with certain therapeutic advantages, which has been brought out on the market under the name of ephetonal

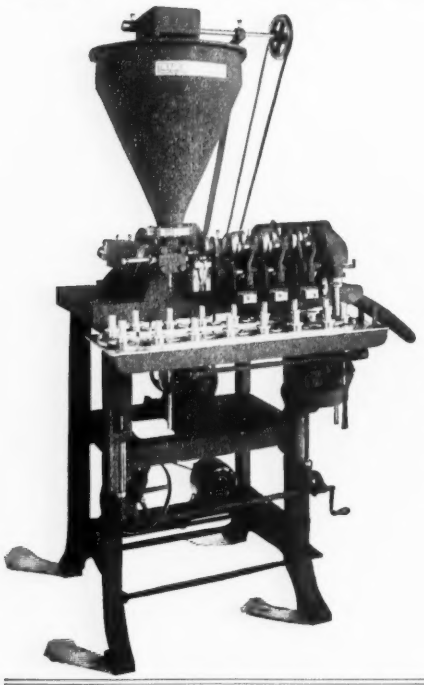
Ephetonal has a chemical name, namely, 1-(para-amidophenyl)-1-oxy-2-methyl-amidopropan-monohydrochloride, and its formula is $(NH_2)C_6H_4CH(OH)CH(NH.HCl.CH_3)CH_3$. It is a white powder which is optically inactive. It has a rather indefinite melting point at 175 degrees C. The melting point of the free base is 105 to 116 degrees C. Its pharmacological effects is different from that of ephedrin in this respect that the extent of its so-called sympathetic action is greater. This means that the typical action of this drug on the sympathetic system does not change to the opposite effect, as in the case of ephedrin, when the dose is increased or repeated. Furthermore, the new preparation ephetonal is about one-third to one-half as poisonous as ephedrin. The new drug is used in the same manner as ephedrin and ephetonin.

The preparation, which is known as sympatol and which is manufactured by the firm of C. H. Boehringer Sohn A. G., belongs to the same group of substances. Sympatol is the tartaric acid salt of para-methylamino-ethanol-phenol. The formula of this substance is as follows: $(OH)C_6H_5CH(OH).CH_2(NHCH_3)$. (Compare the formula for ephetonal). The single chemical difference between this substance and adrenalin consists of the fact that sympatol possesses only one hydroxyl group in the para-position, while adrenalin, is a pyrocatechin derivative. The pharmacological action of sympatol corresponds to that of adrenalin, but there is a difference between the two as follows: Sympatol regularizes the heart action and the action of the heart is not affected in any way at all by the drug sympatol. The poisonous properties of this drug are about fifty to one hundred times less than those of adrenalin. Hence this drug may be used in the place of adrenalin and can be administered by the mouth. The literature on sympatol is as follows: Trendelenburg, Deutsche Medinizische Wochenschrift, year 1930, number 47 and Hochrein, Muenchner Medinizische Wochenschrift, year 1930, pages 1789 following.

Inasmuch as a reduction in the quantity of papaverin must be expected from the increasing limitation of the cultivation of opium, experiments have been conducted to prepare synthetic products. E. Merck & Co., Darmstadt, Germany, have brought out the preparation known as eupaverin. The chemical name of this drug is 1-(3:4)-methylenedioxybenzyl-3-methyl-6:7-methylene-dioxy-isoquinolin. This compound is related to papaverin. The formula for the latter drug is $C_{20}H_{21}O_4N$ and that of eupaverin is $C_{19}H_{15}O_4N$. The melting point of eupaverin is 140 degrees C. It is slightly soluble in water and in petroleum ether, and more easily soluble in ether, methyl alcohol, ethyl alcohol and benzol. The pharmacological action of this drug is the same as that of papaverin, but the scope of the action obtained with it is however greater than in the case of papaverin. Furthermore, it possesses only half the poisonous potency of papaverin. Its use is indicated in the alleviation of intestinal cramps and spasms. The literature on eupaverin is as follows: Wolfes and Kreitmair,

(Continued on page 101)

Save and Be Safe
With the *Kiefer Clipless Closure*



Clips are no longer necessary. That fact is recognized and admitted since the introduction of the Kiefer Clipless Closure.

No clip troubles!

No clip expense!

The Kiefer Clipless Closure (patented) seals your tubes with a *tight* handsome closure. Compare it with any other closure. The Kiefer closure will hold. It can be used with confidence.

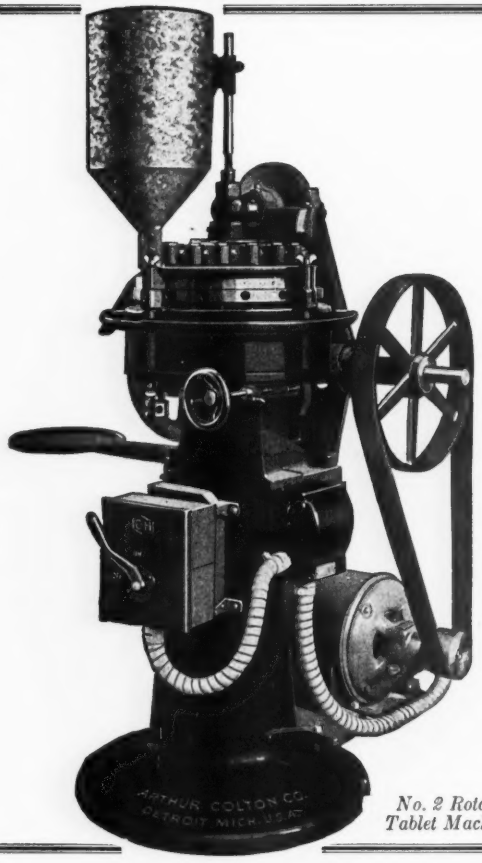
Longer Tubes are Not Needed for the Kiefer Clipless Closure

Remember this when you decide to save thousands of dollars by eliminating clips. Don't offset that saving by using a closure that requires longer tubes.

The Kiefer Tube Filler and Closer uses our "Impacta" method of filling (patented). Fills your tubes solidly, free from air bubbles, cleanly. No wiping of tubes.

Write for sample tube and full information

The Karl Kiefer Machine Company
Cincinnati, Ohio



No. 2 Rotary Tablet Machine

New and Improved!

We have no yearly models—but improvements and refinements are being constantly added to Colton machines.

There are over five hundred Colton Rotaries in use.

Superior design, sturdy construction and ease in operation have made this possible.

The No. 2 Rotary Tablet Machine has such desirable features as *positive pressure*, eliminating varying thicknesses of tablets; *hardened steel gear drive*, eliminating frequent replacement of worms used on other makes, and *sliding upper punch holders*, to hold the punches rigidly, enabling the manufacture of special shaped tablets most satisfactorily.

Write for Catalogs.

ARTHUR COLTON COMPANY

2620 East Jefferson Ave.
Detroit, Michigan

For Plant Managers

By Francis Chilson

Molding Lipsticks

Manufacturers of lipsticks often find that rejects of molded sticks are excessive during the molding process. These rejects are usually full of air holes, depressions, or lines which make the finished stick unsightly. This condition is usually caused by a formula that will solidify too quickly and also by pouring the hot mass directly upon a cold mold and permitting it to flow into the interstices of its own accord. Naturally, the first part of the batch to strike the mold will chill or crystallize and cause marks such as those described. This can be avoided in two ways: by using several molds, warming them before pouring; and by designing a pouring can with several spouts so that the hot mass flows directly into the interstices instead of flowing over the surface of the mold and filling the interstices gradually.

Cold water is sometimes used for chilling the filled mold, but it is not desirable when the coloring material is eosine. Dry ice may be used to advantage when production is small, but in large production an electric refrigerator gives ample capacity and quick chilling.

Drug Deterioration

When reducing crude drugs to a very fine powder, extreme care should be taken to protect them against exposure to light, air and moisture, for the reason that drugs in this state will deteriorate very readily. Also, the finer the mesh, the greater is the loss from seepage and dust likely to be. A well-known drug milling company once reported that loss from both of these conditions ranged all the way from 6% in the case of Cinchona Bark to 36% for Nux Vomica.

Cooling Tables

Manufacturers of toilet creams who use cooling tables for chilling purposes often run into difficulty because of the tendency of the creams to dam up at the turn tables which transfer the filled jars from one belt to another at each end of the cooling table.

When this condition arises, examination will show that the turn tables are operating at different rates of speed, owing to the fact that they are driven by the friction of the belt and not independently. Many of the old style cooling tables are designed in this manner. It is a very simple procedure to gear each turntable and to run a geared shaft under the cooling table, so that it will mesh with gears placed under each turntable. In this way all the turn tables in the row will be driven positively. The improved standard tables which are now on the market, however, do embody this feature.

Dangerous Chemicals

When a plant manager receives a new ointment formula from the research laboratory he should scan it carefully to make certain that it does not contain chemicals which are likely to attach the metals out of which his mixing and filling equipment are made, and which will thereby spoil both the equipment and the ointments themselves. Some of the more active ones which should be safeguarded against by means of porcelain or alloy linings are: Potassium and Sodium Hydroxide, Carbolic Acid, Salicylic Acid, Tannic Acid, Iodine, Mercuric Chloride, Amoniated Mercury, etc.

Iodine Tanks

Iodine has the viscious quality of being able to seep through tank fittings; therefore all iodine tank fittings should be brazed on.

Sifters as Mixers

When a very small quantity of an active substance is to be incorporated in a large quantity of carrier, the mixing operation can be carried out in a sifter, particularly when the active ingredient is extremely difficult to mix, as, for instance, when Strychnine Sulphate is mixed with milk sugar in making the mass for hypodermic tablets.

Notes on Sifting in General

Since every batch of sifted crude drugs contains a relatively large percentage of extremely fine product which, naturally, will go through the sifter first, it is desirable for successful percolation to mix such sifted materials after sifting.

Successful sifting, particularly when bolting cloths are used, requires that the sifter be permitted to operate at a normal rate of speed. If attempts are made to force the product through by means of a stick, or by forcing with pressure, the mesh of the cloth will spread and permit coarser particles to pass through.

When crystalline substances are sifted, it is likewise desirable to permit the sifter to operate at its own rate of speed, because forcing such materials will have a tendency to pulverize them finer than is desirable.

Opening Face Powder Boxes

If telescope face powder boxes are purchased completely assembled—and this is the way they usually are purchased to prevent warping—it is difficult to disassemble them for filling without injury to the drums. In any event, it is a slow process. If, however, a small air compressor or suction fan is available a small vacuum device can be rigged up to enhance the speed of the operation. One of the ways in which such a device can be made is to set up a suction pipe with a foot treadle shut-off, so that the operator can place the bottom containing the drum against the mouth of the suction pipe in such a way that it will hold the drum and permit the operator to pull the bottom off. By shutting off the air with the foot treadle the drum will then fall on to the conveyor belt.

New Pony Mixer

A new type pony mixer has been placed on the market by the Kent Machinery Co. This machine is provided with a covered tank, which is a particularly desirable feature for manufacturers located in cities where dust is unavoidable. The machine is provided with a variable speed mechanism and its agitating apparatus is a combination of the standard pony mixer type and that of the more expensive vertical mixer.

Correction

A typographical error appears in last month's column. Speaking of Mr. R. W. Hompe it says: "He very *proudly* has

Improve your package —*it helps sales*

The sales volume of many products has shot upward as a result of an improvement in the package.

It may be that *your* sales could be improved in the same way.

We will be glad to help you secure the best type of package for your product—a *package that sells.*

For over a quarter-century we have served the package goods industry, devising better forms of wrapping, and providing the machines to do the work. For example, we have developed machines for wrapping a wide variety of products in Cellophane, including Camel Cigarettes in the famous "humidor pack".

Why not make use of this wide experience? Get in touch with our nearest office.

PACKAGE MACHINERY COMPANY
Springfield, Massachusetts
New York Chicago Los Angeles
London: Baker Perkins, Ltd.

PACKAGE MACHINERY COMPANY
Over 150 Million Packages per day are wrapped on our Machines

"FILMASEAL"
Trade Mark Reg. Patents Pending

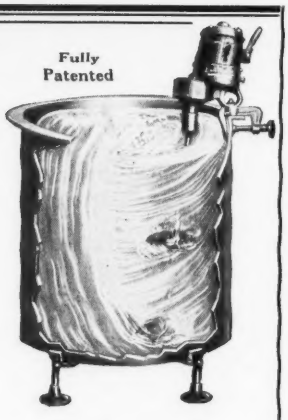
Airtight . . .
Leakproof . .
Tamperproof .

A transparent film sealed to top of container
Plus our continuous thread screw cap
Film must be removed to reach contents
Used with standard C. T. bottles and jars
Automatic application . . . no decrease in output
Adapted to large scale production
One of our films will serve your purpose

FERDINAND GUTMANN & CO.
Bush Terminal No. 19 · Brooklyn, N. Y.
SANISEAL METAL MILK CAPS . . . DISTILLED WATER CAPS
CROWN CORKS
CONTINUOUS THREAD CAPS . . . SPECIAL PURPOSE CAPS
Closure Specialists Since 1890

LIGHTNIN PORTABLE MIXERS

Fully Patented



Protect the **QUALITY** of Your Product

THE terrific pressure of competition becomes dangerous when you permit any variation to occur in the uniform quality of your product. That is why LIGHTNIN mixers become daily more important to you and to your field. The "double action" illustrated here is the reason for LIGHTNIN thoroughness; LIGHTNIN speed; LIGHTNIN economy in time and labor saving. And there is a LIGHTNIN with just the size . . . power . . . and capacity you require.

MIXING EQUIPMENT CO., Inc.
Originators and Largest Manufacturers of Portable Electric Mixers
1060 Garson Ave. Rochester, New York
229 EAST 38th STREET NEW YORK CITY

more good ideas," etc. "Probably" was the word intended.

Power Distribution

In distributing overhead expenses to departments in order to establish accurate costs, the cost of power is often pro-rated on an arbitrary, and hence inaccurate basis, for the reason that power meters for each department would require too great an investment. In order to distribute costs by mathematics it is necessary to reduce all power consumption to a common denominator, such as horsepower hours, and this is difficult when all apparatus is not rated by horse power. Therefore the following conversion factors will help.

Kilowatts x 1.34 = horse power.
Watts ÷ 746 = " "
1 Watt = .00134 HP.

Metal Labeler

We have heard of the development of an automatic labeling machine for affixing metal labels and seals. This is good news for perfume manufacturers and we hope to announce details very soon.

New Collapsible Tube

Something new in collapsible tubes was exhibited to us recently. It is a non-metallic tube, said to be very much cheaper than metal ones.

Plastic Caps

If you are using plastic caps and are having trouble with breakage, you will find that the difficulty probably lies in the seating of the liner and not with the machine. If the liner is not seated properly and an edge sticks up slightly along the side the cap will break.

A New Cap

One of the cap companies is building dies for a two piece metal cap combining the advantages of the colors of the plastic caps with the cheapness of metal.

Letters on Machinery Catalogs

We have received the following letter from Mr. C. F. Peehl, factory manager of the Marinello Company:

"In the June issue of DRUG MARKETS Plant Managers Column, page 623, there was a small article on 'What Do You Think of the Average Machinery Catalogue ?' I am answering the questions appearing in this article:—

Q-1. Do you keep catalogs or throw them out ?

A. I keep catalogs when they are in the form of a booklet. When I receive a leaflet, I read it and then throw it out.

Q-2. Do you keep them on shelves or in a catalog file ?

A. I keep them on shelves.

Q-3. What do you think would be an ideal standard size ?

A. Drug Markets Catalog and Directory for 1931 is a very good size. You can place it on a shelf or in a regular letter size file cabinet.

Q-4. What information would you like to see in a catalog and how should it be presented ?

A. I would like to have a catalog that has a number of illustrations, that gives prices, capacities and tells its general use. It should be presented in a technical manner."

New Catalogs

U. S. Bottlers Machinery Co., Chicago, has issued an interesting and beautifully illustrated bulletin entitled, "Washing & Drying Equipment". This book is to be part of an entire new catalog, which will be issued in five or six sections, each section dealing with a different type of machinery, such as washing and drying equipment, corking and capping equipment, filling machinery, filtering outfits, conveyors, etc. These sections will be issued one after another and, when the entire series is completed, the units will be bound together for those who require a complete catalog.

Patterson Foundry and Machine Company has issued a new pebble mill catalog.

New Jersey Machine Corporation has issued a new catalog featuring a semi-automatic can labeler and their regular line of box labelers. The can labeler is especially interesting because of its compactness, inexpensiveness and flexibility.

Combustion Engineering Corporation, 200 Madison Avenue, New York, has just issued catalog SG-1, describing the *Combustion Steam Generator*, which is a single unit embodying in an integral design the several elements required in the production of steam. The purpose of this design is to so coordinate the functions of the various elements as to insure maximum efficiency with minimum operating and maintenance costs.

The Combustion Steam Generator is available in 8 standard sizes providing a wide range of capacities for any desired steam pressure and temperature. Pulverized fuel is introduced at the four corners of a completely water-cooled furnace and is burned with intense turbulent mixing action. The gases leaving the furnace pass through the superheater at the top of the furnace, thence through a bank of convection tubes and finally through a plate-type air preheater, to the chimney. A novel arrangement provides for regulating the temperature of the superheated steam under all conditions of operation.

The catalog is well illustrated and includes overall dimensions of the 8 sizes of steam generators. 20 pages and cover—8½ by 11.

The U. S. Stoneware Co. has issued Bulletin 402 describing ceramic tanks, pots, stills, agitators, tumblemixers, evaporating pans and filters. The tumblemixer is a churn-like mixer securing its mixing or emulsifying action by tumbling the batch as the barrel revolves. This catalog is a good example of machinery literature containing detailed technical specifications.

Arthur Colton Company has sent us a leaflet describing the new Colton Collapsible Tube Closure, together with data on both hand and automatic machines for producing it.

James A. Corcoran, 43 Murray St., New York, is local agent for the Mario Tanzi seidlitz powder filling machines and also this company's cachet filling machines. Both machines come in semi and full automatic models. The seidlitz powder machines can also be used for filling face and medicinal powder samples and for tablet and pill samples. Cachets have been used in this country less extensively than abroad, primarily for the reason that heretofore there existed no machine which would open, fill and seal the cachets automatically.

I wish to call attention to a device featured in the new catalogue of the Patterson Foundry and Machine Company. It is a hood for enclosing pebble mills when in use for dry milling, such as the milling of face powder. An opening is provided at the top for loading the mill, and at the bottom the hood forms an outlet hopper, thus making it possible to load and discharge the mill without dust.

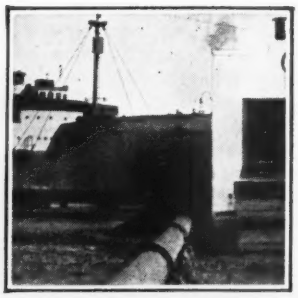
I wish to correct a statement made in my article on tooth-paste to the effect that automatic tube fillers do not lend themselves to a variety of tube sizes. This is erroneous. Some of the recent models are designed for quick change over and may be used for filling a variety of sizes.

Through an inexplicable oversight the Ayers' Tablet Filling and Counting Machines were omitted from the DRUG MARKETS Catalog. This company is well known in the field, and markets a variety of semi and full automatic tablet fillers capable of filling and counting all shapes and sizes of tablets. The address of the company is J. W. Ayers & Son, 90 Walker Street, New York. Please note this in your copy of the Catalog.

Ritter Dental Mfg. Co., Inc., has declared a quarterly dividend of 37½ cents per share on the outstanding 160,000 shares of common stock, no par value, payable July 1 to holders of record June 20. Previously the company made regular quarterly distributions of 62½ cents per share on this issue.

• U. S. INDUSTRIAL CHEMICAL CO. INC., A SUBSIDIARY •

U. S. INDUSTRIAL CHEMICAL CO. INC., A SUBSIDIARY OF U. S. INDUSTRIAL ALCOHOL CO.



Four company-owned steamers bring molasses direct to plants.

Largest assembly of alcohol distilling columns in the world.

Battery of individual denaturing tanks for preparing each formula.

U. S. I. A.'s
Service to Industry

SHIPPING COÖPERATION

THOROUGH knowledge of Federal and State Prohibition laws and regulations enables our sales-warehouses and manufacturing plants to render full coöperation to manufacturers and others regarding permits, withdrawals, transit requirements and other matters which might hold up important shipments.

With our nation-wide facilities embracing twenty-two warehouses and six manufacturing plants located at strategic industrial centers, shipments may be delayed for reasons beyond our control. Reference is made to delays caused by the improper filing of permits, bonds, applications, etc., with the government offices.

Hours, days, even weeks, can be saved in effecting delivery by close observance of routine required by Federal and State Bureaus. For a quarter of a century, the U. S. Industrial Alcohol Co. has worked in close coöperation with government officials in the observance of regulations pertaining to the manufacture, handling and shipping of industrial alcohol. Necessarily, this experience has resulted in our utmost familiarity with the scope and requirement of the regulations.

When the question of proper application for permits, bonds or withdrawals to meet a rush shipment arises, we are glad to extend whatever coöperation and advice are necessary to assure your application conforms to regulations. This consultation service is available at any of our sales-warehouses and manufacturing plants.

28 CONVENIENT DISTRIBUTION POINTS

Manufacturing Plants

New Orleans	Newark	Baltimore
Buffalo	Anaheim	Peoria

Branch Sales Offices & Warehouses

Atlanta, Ga.; Baltimore, Md.; Boston, Mass.; Buffalo, N. Y.; Chicago, Ill.; Cincinnati, O.; Cleveland, O.; Dallas, Tex.; Detroit, Mich.; Indianapolis, Ind.; Kansas City, Mo.; Los Angeles, Cal.; Louisville, Ky.; Memphis, Tenn.; New York, N. Y.; New Orleans, La.; Philadelphia, Pa.; Pittsburgh, Pa.; Portland, Ore.; St. Louis, Mo.; St. Paul, Minn.; San Francisco, Cal.; Seattle, Wash.

The U. S. Industrial Alcohol Co., 60 East 42nd Street, New York, N. Y. Branches in principal cities.

U. S. INDUSTRIAL ALCOHOL CO.

WORLD'S OLDEST AND LARGEST MANUFACTURER OF INDUSTRIAL ALCOHOL

All standard specially denatured alcohol formulae stocked at all warehouses

Makers of PYRO . . . the Standard Anti-freeze and general utility Denatured Alcohol

U. S. INDUSTRIAL ALCOHOL CO.

• U. S. INDUSTRIAL CHEMICAL CO. INC. •

• U. S. INDUSTRIAL CHEMICAL CO. INC., A SUBSIDIARY OF U. S. INDUSTRIAL ALCOHOL CO. •

Santonin Supplies

MINOR fluctuations in the price of santonin during the past month has focused attention upon this century old vermifuge. While the Russian producers have maintained a quoted figure of $120.00 to $125.00 per pound, there have been offerings from other sources quoted at $115.00 to $118.00 per pound and some reports of even lower quotations.

These outside supplies come from four sources—one in this country, two in England and one in Germany. The two factors in England are manufacturing from a wormseed imported from India, while in this country and in Germany, the producers have succeeded in growing their own raw material. Of course the output of all four of these producers put together is insignificant in comparison with the world consumption and with the requirements of this market, but it results in offerings being placed on the market at prices sufficiently under the established price to attract business.

Until the advent of this production outside of Russia, the production of santonin had been confined to The Santonin Works, Tehimkent, in Turkestan. The tiny flowerheads of the plant Artemisia Cina (Berg) is indigenous to certain sections of Turkestan and it was from these flowerheads, the wormseed, levant, or santonica, of commerce that santonin was first extracted in 1829. These flowerheads had been used as a treatment for worms for many centuries before the Christian era and their use, chiefly in the form of santonin has continued to increase unabatedly up to the present time.

Collection in Russia

In Russia, the flowerbuds are collected in July and August, because at that time the santonin content is greatest, being variously reported as ranging as high as 2½ per cent. and as high as 3½ per cent. After blooming, the flowers quickly lose their santonin principle. In the manufacture of a pound of santonin in Russia, anywhere from 30 to 50 pounds of santonica is reported to be used.

Little or nothing is known concerning the santonin content of the wormseed used by the producers outside of Russia. The Indian wormseed used by the two English producers is said to range as high as three-quarters of one per cent. of santonin content, but lack of facts prevents an estimate of the santonin content of the wormseed grown in Germany and in this country. Such quotations as are available on the Indian wormseed indicate that it sells for about 50 cents to 60 cents per pound, as compared with about $3.00 to $3.50 per pound for the Russian wormseed. Another feature of the wormseed crop is the fact that it varies considerably from year to year, sometimes being high in santonin content and at other times falling lamentably low.

Santonin was first detected in the Artemisias of India in 1919. Several species grow in India, but only A. Maritima and A. Brevifolia contain santonin in any appreciable amounts. According to "Chemist & Druggist," "the proportion of santonin varies according to the nature of the material and the season of collection from a trace to 1.95 per cent. This is below the Russian yield of two per cent. For commercial purposes it may be roughly calculated that 0.60 per cent. santonin is recoverable from the Indian raw material against a commercial yield of 1.8 per cent. of the Russian plant. But the Indian stuff is abundant and cheap on the spot."

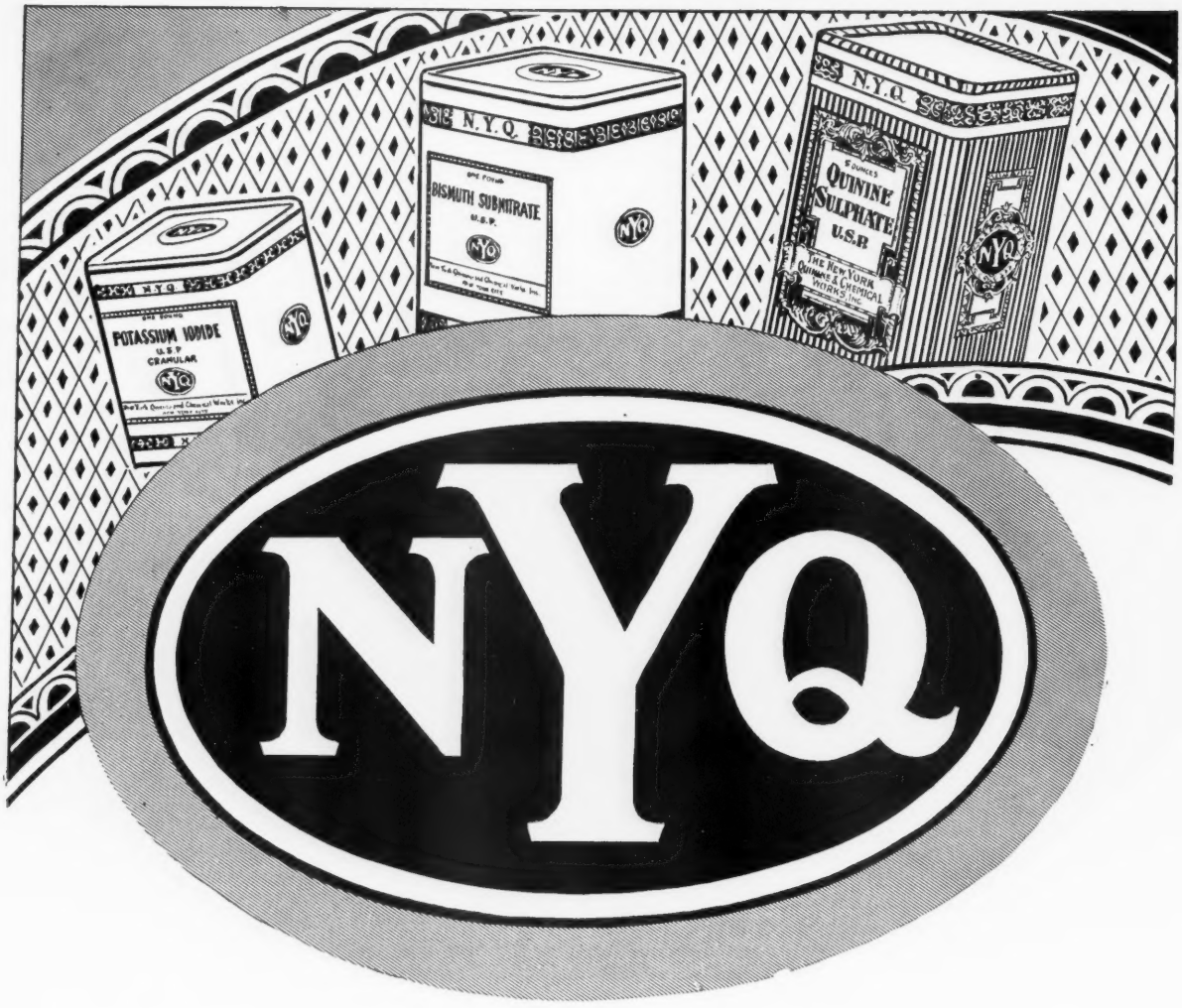
It is also reported that, in order to take full advantage of the wormseed which they are using as raw material, the producers outside of Russia have developed a new method of extraction making use of the entire plant instead of only the flowerheads.

The process patented in Germany in 1920 for extraction of the whole herb of Artemisia Maritima, growing in Germany near the North Sea and the Baltic, is described as follows:

"The whole plant finely divided is ground for a prolonged period with milk of lime and the calcium santonate extracted with water or dilute alcohol. The solution is evaporated to dryness, and the residue is acidified and extracted with chloroform. After removing resinous compounds by agitation with diluted ammonia, a syrupy residue of santonin is obtained by evaporating the chloroform."

While imports of santonin into this country continue steady, imports of

Wormseed Levant



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wormseed have ceased completely. The last shipment of wormseed, levant, came into this country in January 1930 and amounted to 231 pounds. Previously our imports had been 1,217 pounds in 1929; 1,417 pounds in 1928; 4,417 pounds in 1927; 4,182 pounds in 1926; and 2,871 pounds in 1925.

Imports of santonin have held a steady course amounting to 1,584 pounds in 1926; 2,007 pounds in 1927; 1,845 pounds in 1928; 1,565 pounds in 1929; 1,566 pounds in 1930; and 290 pounds for the first five months of 1931. Of the 290 pounds imported during the first five months of this year, 275 pounds came from Germany and 15 pounds from the United Kingdom. Of the 1,566 pounds imported in 1930, 1,429 pounds came from the United Kingdom, 126 pounds from Germany, and 11 pounds from Canada. As shipments of Russian santonin came only through the United Kingdom, these figures are particularly revealing.

It is interesting to note that in the last tariff revision, the duty of 75 cents per pound which had formerly been charged to that item was removed on the plea of farm relief, since the farmer is the biggest user of santonin as a vermifuge for his livestock. The farmer also uses various other products as a vermifuge, especially in hard times when he feels that the price of santonin is too high. Carbon tetrachloride and wormseed oil are two of the cheaper substitutes which attract considerable sale.

Chamomiles Weaken

A reduction in the price of Hungarian chamomile flowers has failed to bring out any improvement in demand during the past month. Demand is decidedly spotty with shipments going forward in small quantities only. The spot price for Hungarians is now from 15c to 17c per lb. with the Romans offered at from 37c to 40c per lb. It would seem that buyers are awaiting new crop arrivals before making commitments as a better quality of goods is expected than that obtained from the old crop which ran into considerable difficulty with the Department. During the week ending July 8, 10 cases were detained as not being up to specifications.

Orris root is gradually working to lower levels. Florentine has been reduced 1c to the basis of from 15c to 16c per lb. Verona is also lower at from .09½c to 10c per lb. Somewhat lower cost of replacement with a decline in the active demand on spot is the reason.

Borage flowers is another item that has been weakened materially by the small demand and general lack of interest in this commodity. The price range is from 12c to 13c per lb. which represents a reduction of about 3c per lb. during the past month.

Supplies of Psyllium

PSYLLIUM seed on spot is marking time until the arrival of new crop expected shortly. What old crop business is being done is in a small way at about 50c per lb. Futures are being dealt in, however, at a price reputed to be anywhere from 18c to 22c per lb.

Assistant Trade Commissioner Paul L. Hopper, Calcutta reports that the high prices now prevailing in the United States for psyllium seed, imported chiefly from France, has focused attention on possible procurement from other sources. That several varieties of plantago are indigenous to India has been known for centuries and extensive use of the drug has long been made by native medicine practitioners. Three species of plantago are familiar to India drug dealers, plantago ispagula, plantago ovata, plantago lanceolata plantago major, plantago psyllium or plantago Asiatica. The first named grows wild in northern India and is said to be cultivated to some extent in Bengal, Mysore, and along the Coromandel Coast. Production of psyllium seed in India was estimated at about 120,000 pounds for 1929-30. Judging from a report of the Bureau's Bombay office, however, production has been increasing, as one Indian firm is said to have shipped over 200,000 pounds to the United States during the past few months.

Another item of interest in this market is that the first crop of cultivated plantago psyllium is expected to be harvested in Greece this month. An individual, native of Greece and resident of the United States for a number of years, returned to his mother country in order to undertake the project.

There have been leased several thousand stremmata in the Argos district in the Peloponnesus and 2,000 stremmata, or about 500 acres, were sown with psyllium seed of Tunisian origin purchased in Marseilles.

The yield per stremma cannot be estimated at present, but the grower claims that about 50,000 kilos of psyllium seed may be collected during the harvest. If this trial cultivation of psyllium proves to be satisfactory it is believed that further efforts will be made to promote the cultivation of this product on an extensive scale and that Greece may eventually become one of the important suppliers of psyllium seed to the consuming American and European markets.

Total imports of psyllium seed, entered for consumption into the United States for the first quarter of 1931, amounted to 604,500 pounds, valued at $143,000. France continues to be a leading supplier, but British India is receiving increased attention as a source of supply. The Indian or blond seed is quoted in the spot market at about .08 per lb.

Arabic Easy

Gum arabic continues weak with amber sorts freely offered at from .09 to .09½c per lb. The higher priced grades have again been reduced with white No. 1 offered at from 21c to 22c per lb., seconds at 20c and 21c per lb. Production has been very heavy in the Sudan and demand in the larger consuming markets considerably below normal.

Exports of gum arabic from Egypt during the first three months of 1931 totaled 7,542 tons, as compared with 6,474 shipped abroad during the corresponding period of 1930. The following table shows the distribution of shipments according to countries of destination during the first quarter of 1931.

	Tons	*Value*
Great Britain	2,035	£68,779
United States	1,277	41,753
Germany	846	27,375
France	744	23,740
Belgium	540	18,017
Japan	502	17,237
Italy	415	13,481
Other countries	1,123	36,807
Total	7,542	247,189

Production has now about ceased as the rainy season is beginning. What small quantities of gum is received in the primary market at this time of year is inclined to be water damaged and not of a desirable quality. Although prices are now at a level lower than has been reached in many years there is little likelihood that they will react to higher levels as production has been well ahead of the consuming requirements.

Ipecac Lower

Carteagna Ipecac Root, although statistically in a strong position, has eased off during the past month and is now offered at from $1.25 to $1.30 per lb. Powdered is offered at from $.150 to $1.55. Stocks in the spot market are still in a few strong hands with reports that very little or no new supplies are arriving in this country. Demand has been quiet, however, resulting in the small concession offered.

Spanish saffron, which had been a strong item several months back, has been weak and inactive during the past month. Price has declined to the basis of from $10.50 to $10.75 per lb. with reports that at this level the commodity is subject to shading. Lack of demand is primarily responsible as stocks do not appear to be over plentiful. The domestic grade is offered at from 24c to 25c per lb.

Although stocks of dandelion root are reported as not being unduly large new crop prospects are good and it is generally agreed that replacement costs will be lower. The commodity has therefore been reduced on the spot to the basis of from 12c to 13c per lb.

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Quinine's Market Tone

WHILE the market for quinine is "officially" unchanged at 40 cents per ounce for the sulfate and bisulfate, the unsettlement in this market due to outside material being offered at lower prices is far more pronounced today than it was some time back. "Outside" sulfate and bisulfate are offered at a range of prices which seem to have a top limit of 38½ cents per ounce, and a bottom level of 36 cents per ounce.

Why such a condition is possible with the Dutch monopoly still in control of the situation throughout the world is easily understood when it is realized that the present low prices for quinine are for material made by a Dutch quinine manufacturer who is not in the Dutch combine. There are always independent quinine makers in various countries throughout the world; they come and go. Sometimes these makers grow to such a size that they are persuaded to join the combine and cease their independent operations.

For this reason it can readily be seen that there is but little possibility of any one of these independent manufacturers becoming large enough of himself seriously to upset the general market. For the same reason it can also be seen that the real large consumers of quinine who must be certain of their source of supply can tie up definitely with the independent manufacturers who for a time may quote below the monopoly price.

Appears More Upset

It is a fact that the market today appears to be more upset by the cut price than at any other time during which an independent manufacturer was shipping into this market. This is due largely to the fact that business conditions are poor and quinine consumption is below what might be termed normal. Also there is the fact that the amount of quinine formerly used as a denaturant for alcohol is not used for this purpose today. These two facts produce the condition that the cut price seller must offer his goods to more customers to dispose of them. The facts also mean that the quantity of quinine sold by the independent maker represents a larger percentage of the total consumption in this country than it would have represented in other years of good business and much use of quinine as a denaturant.

The question is being asked by many if the monopoly is likely to reduce the price. But the answer to this question lies hidden with the Java growers of cinchona bark and Dutch makers of quinine. Here the question of the relation of the percentage of the entire world market supplied by the monopoly compared with the percentage supplied by the independent producers is the answer. If Japan, the United States, and other countries are partially supplied by independent makers, or if some of them are even totally supplied by independent makers, the amount of business in the hands of these makers must be compared with the total business in the hands of the monopoly to determine whether or not a reduction in price would increase the net income of the monopoly through increased business, or would reduce the net income because the profit on the increased business was not large enough to make for the cut in price.

Basically the quinine situation is no different today than it has been for many years back. From time to time independent makers spring up and disturb the market in some quarters. Either these makers do not grow large enough to become a real menace to the monopoly in any of the major markets, or else they are taken into the combine. Probably with the return of better business conditions, the present maker's material will not be so noticeable in the market. Or perhaps he will be taken into the combine. A third possibility, by far the most remote of the three, is that the general conditions as well as the competitive conditions in quinine might force a general reduction in price.

Spearmint Oil Off

Spearmint has eased off during the past month to the basis of from $1.85 to 2.00 per lb. In spite of the recent dry spell in the west, which was reported as having greatly affected the crop prospects on peppermint, spearmint has declined and this factor was now used to bolster up the market. An ample carryover supply is said to exist in both the primary and spot markets with prospects of a normal production from the new crop.

Although wormwood stocks on spot are reported as small the new crop prospects are favorable so that the market here has eased off to the basis of from $6.50 to $6.75 per lb. Firm business, it is reported, would shade these quotations somewhat.

Spearmint leaves are easy at 22c to 23c per lb., a reduction of 3c during the past month. It is also reported that some shading below these levels would be possible on firm business. Movement into consuming channels has been very light and a new crop is in prospect. The crop is reported as progressing favorably with the possibility of ample supplies being available after the harvest.

Cotton root bark is lower on spot being offered at from 7c to 8c per lb. This commodity is inactive to the extent that the views of holders have been weakened. It is reported that the drop of 1c per lb. during the past month has not strengthened the situation materially and that the undertone continues to lean toward the easy side with the possibility of 6½c per lb. being done on firm business.

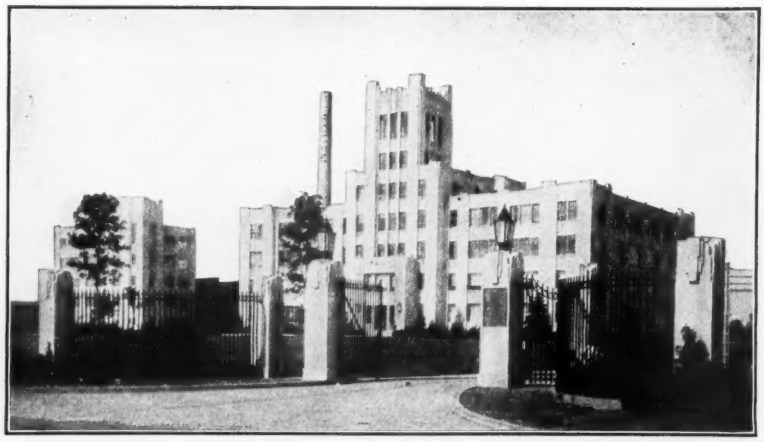
Peppermint leaves are now being imported into this country from Hungary. Hungarian producers have succeeded in transplanting successfully the original Mitsham peppermint and new crop of these leaves are now available at 30c per pound. The Hungarian grade is said to be superior to other imported grades in that it has a higher oil content.

Colombo root has been reduced 1c per lb. during the past month and is now offered at from 6c to 7c per lb. The price of this commodity was reduced officially by one of the large dealers in order to meet shading in price that was quite general. Demand is quiet.

Italian Experiment Station has inaugurated a prize contest for suggestions of specific new uses for bergamot oil. The following prizes are offered: 10,000 lire for a bergamot toilet water, eau de cologne type; 5,000 lire for a bergamot tooth paste; 10,000 lire for a bergamot perfume consisting of one or more essences such as rose, jasmine, bitter orange or mimosa; 10,000 lire for an unpublished therapeutic application of bergamot.

Canadian Industries, Ltd., jointly owned by du Pont and England's I. C. I., is planning construction of new $1,500,000 cellophane plant at Three Rivers, Quebec.

ROCHE



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Grasse Market Facts

By O. C. Zilisch

ALTHOUGH the so-called crisis in Grasse and the surrounding country still exists, there are signs on the horizon that it is lifting. Certain favorable indications are noticeable, and the feeling is less strained in various quarters. It has been a hard period, and still remains very uneven, but things do look better. The existence of large stocks and a lack of liquid capital was the trouble, with the result that loans were sought to alleviate the situation. Loans in a number of instances were forthcoming, but in others they were not, especially those originating in private quarters. At any rate, the situation has brightened some, and it is thought that the condition that has existed for some time is actually lifting, particularly with the prospects of more manufactured goods passing into consumption. Many of the de luxe products in perfumery are, perhaps, showing a loss in sales, but the standard type of goods, like eau de Cologne, lotions, rose water, etc., are holding their own.

Weather Unsatisfactory

Weather conditions throughout the Grasse region have been characterized by a heaviness and state of humidity that is extremely rare in the section, looked upon as blessed by the gods. Heavy fogs, of unusually long duration, have proved themselves a veritable menace to certain cultures like the grapes grown in the region. Not only this culture but others were threatened by the particularly heavy fogs that made their appearance from the first of June on. People in that part of the country live in fear of this type of weather.

The rose and orange flower yields terminated about the 10th of June, and as was stated in Drug Markets during the past few months they ran below what is considered normal in the region. Both cultures showed up pretty well, considering everything, except for the orange flower, which did not produce the amount of oil expected, due to the exceedingly dry weather that reigned throughout the section for a period of months, as signalled some time ago.

Insofar as the rose is concerned, the yield ran to approximately half the normal. The Perfumers' Syndicate of Grasse fixed the price at 1 franc 50 centimes per kilogram, delivered to the factory. During the taking in of the yield, as the result of a request, registered by the Cooperative "Hortus," the distilling perfumers slightly raised the price, causing it to vary between 1 franc 50 centimes and 1 franc 70 centimes paid the growers. Even though the effort to raise the price was deeply appreciated by those concerned, still it is considered that prices of this kind are way below what they should be in order to give the grower some sort of return for his money invested, and to help him cover his heavy expenses, gathering and otherwise. In fact, this year's yield has once more shown a decided loss to the grower, as predicted in previous issues. Furthermore, many of the plantations have been allowed to suffer a neglect that will be difficult to remedy. The interest on the part of the grower was not there, in view of the situation existing in the region. According to figures furnished, the total rose production was 700,000 kilograms, approximately.

The orange flower trees were favored somewhat, despite the delay in flowering, with the yield running to about ¾ the normal, or 1,200,000 kilograms. A price of 4 francs (16 cents) per kilogram, delivered to the factory, which had been fixed by the Perfumers' Syndicate, was maintained throughout the gathering period, with even a slight raise of 10 centimes per kilogram, to cover the transportation charges.

Orange Flowers Slow

Movement into consumption of orange flower products has, as everyone knows, been extremely slow, with the result that considerable stocks still remain unsold. The old stocks were comparatively plentiful, with the result that the market remains heavily loaded. There is a great deal of fine neroli lying idle, and which has, of course, decreased very much in price. Those who can are holding on to all they have, with the hope that the depression existing at the present time will lift entirely within a short while.

Up to the present time the jasmine proposition remains obscure, with many persons wondering just where the entire situation is leading. There have been other crises in the region, some lasting over a number of years, but none has ever brought with it the effects of the present crisis. Some of the distilling perfumers who had made agreements with the growers on a contract basis have offered to pay an indemnity of 5 francs (20 cents) per kilogram, payable the 10th of October. This price is based on the average of the last two years, and for this indemnity the flowers will remain ungathered.

There are other distilling perfumers, however, who will, it is thought, accept the jasmine flowers at prices established in connection with the contracts made. The cooperatives will, no doubt, treat a part of their production. As for the so-called *producteurs libres*, or free growers, which means those belonging to no cooperative or having no contract for their crop, they have not, as yet, reached any decision one way or the other. That leaves a large number of the growers without any fixed program up to the present time. It is reported throughout the region that only a small part of this year's yield will be gathered, and that at a very low price.

Jasmine Future Dark

As pointed out from time to time the situation for this year shows up pretty poor for everyone concerned, and unless some ameliorating influence makes its appearance there is going to be an utter lack of encouragement on the part of the growers insofar as the taking care of the jasmine plantations is concerned. Some think that the time is not so far distant when the stabilizing influence of decreased production will be felt. With even a fair movement of jasmine stocks things should brighten for the holders in the Grasse region, and there is no question about it that those holding jasmine stocks of any size are exceedingly low in spirits. Growers and distilling perfumers find themselves in a really uncomfortable situation, as articles by leading men in the trade have pointed out recently. Several of the newspapers in the Grasse region have been carrying stories about the general situation as it exists today, showing that the section has gone through a period that is wholly out of the ordinary.

Other cultures like the tuberose, geranium, mint, etc., have lost their place in the region, and the prices for this year's yields have not, as yet, been fixed, but the prediction seems to be offered along positive lines that the prices will be low. In other words, prices for these cultures will be about the same, comparatively speaking, as those of the other perfume flowers and plants in the region.

One culture that is being asked for in considerable quantities by the herborists is that of the lemon-scented verbena, or

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verveine, which is a favorite in certain districts of the region. The prices paid for verbena this year are, therefore, on a level to be of interest to the growers, who, because of this year's satisfactory reaction, are watching this culture very closely. Those who have the interests of the region at heart are hoping that the overproduction evil will not make itself felt in connection with verbena, and other cultures that show a sudden spurt in the direction of profits.

Lavender distillation occurs during the month of July, and the plantations in the mountains are now in flower. Those under cultivation have been neglected somewhat, whereas those growing wild are normal. What will happen to these latter depends entirely upon the price to be paid for the lavender flower, this price not having been decided upon, as yet.

Lavender More Active

Lavender plantations in the region of the Alpes and Vaucluse promise well, with the exception of certain ones that have suffered somewhat from the dry weather. On the market of Apt lavender oil prices quoted are 80/85, with several lots having been taken at 100 francs on lavender of 44° ester content. Apparently, there seems to be some renewed activity during the past few weeks on the various categories of lavender oil. The situation, as the trade knows, has been anything but brilliant for lavender products, making the growers and distillers very wary in view of the present crop, some of which may not be treated. One thing is certain, and that is that not all of the lavender crop will be gathered this year, due to the condition of the market throughout the world.

The olive trees are in full bloom, and if the temperature favors them then a good crop can be counted upon. Olive oil prices remain practically without change. In Marseilles the market is calm, with quotations Bouches-du-Rhone 800-850; Var 725; Vaucluse 725/820. Insofar as Tunis oil is concerned business is also reported as calm, with the prediction that the crop for this year will be good, for the reason that the flowering period proved very favorable. Quotations are: first pressing, 540/580; second pressing, 515/530.

In Spain the crop for this year is regarded as favorable, particularly in Andalusia, whereas in the Northern provinces the crop is estimated at 30 to 35 per cent. The market shows a trend upward, with orders from abroad coming in.

According to figures recently compiled, the United States imports 40,000 tons of olive oil, eight per cent. of which comes from the French colonies, Tunis and Algeria. This percentage is made up of oils of a high quality. Olive oil exportations destined for the soap makers of the United amounted in 1930 to 28,000 tons, with a value of over two million dollars.

An interesting product of the Grasse region that has gone almost entirely over to the colonies, particularly Algeria, is that of the rose geranium. Algeria sends directly to the United States 40,000 kilograms of oil of geranium, and the business is on the increase each year. The result is that the Grasse region produces very little oil of geranium at the present time.

Otto of Rose Lower

Bulgaria otto of rose is easier in this market with quotations ranging from $11.25 to $12.25 per oz. With a normal production the cost to replace this commodity has decreased rather sharply.

New crop Bulgarian otto prices are expected to be about half those of last season. A Bulgarian distiller reports on the new Bulgarian crop. In general the crop of flowers is 20 per cent. less than last year. Distillation commenced on May 22, and concluded on June 10. The flowering lasted 20 days, which is normal. At the start the weather was very hot, but after May 25 it rained daily, and cooler weather set in. The plants bloomed slowly, and the flowers, although very fine, were too wet. Consequently, the yield was not high, but it can be considered an average one.

At first it was difficult to fix the cost of flowers, and it was only established on June 9 at 7 levas per kilo. After the abnormal price of 22 levas last year, it was not easy to return to such a low figure. Some villages even insisted on 10 levas.

Assistant Trade Commissioner E. P. Keeler, Istanbul, reports that attar of rose is the outstanding essential oil produced in Turkey but that this industry has declined considerably in importance during and since the World War. Exports of attar of roses from Turkey during 1929 were valued at $42,816, as compared with $93,097, in 1925. The United States has been only a fair market for Turkish attar of roses during recent years, deriving its major requirement of this oil from Bulgaria. As yet, little effort has been made to encourage the Turkish attar of rose industry, either by the government, or by the dealers and exporters. Until active assistance is given the small peasant producers, it appears that little further development can be expected.

Peppermint Advances

AN INCREASE of 20c per lb. in the spot market for peppermint oil has increased interest in this item which has been dull for a long time. The price situation has been decidedly weak with the weakness becoming acute in the early Spring when new crop prospects were reported as very good. The primary market was in need of funds to finance the new crop and were in possession of considerable stocks so that they were pressing for sale with the result that the market declined to a low of $1.45 per lb. for the natural oil in producing centers to dealers. This was a price below what had prevailed for many years and was undoubtedly below the cost of production. As usually is the case in a declining market buying had not increased to the extent that offered growers much encouragement.

During the past three weeks, however, a decided change of front has taken place in the primary market. Holders of old crop oil have suddenly ceased to make offerings except here and there at much higher prices. An increase in the primary market of 35c per lb. has been noted. This was immediately reflected in the spot market which is now offering the oil at from $1.85 to $1.95 per lb. for natural, with redistilled USP offered at from $2.00 to $2.15 per lb.

The reason attributed to the strength in the primary market is that crop prospects do not now appear as favorable as in the Spring. It is reported that the drought in the west has so affected the crop that production will be 25% below normal and that only the advent of recent rains saved it from being a complete failure. Such are the reports eminating from the source of supply—although dealers here are inclined to discount the situation to some extent.

One dealer, who is not inclined to take a bullish attitude in the matter has reasoned in this way. Consumption during the past year has been below normal. As the previous crop was a good one, the carryover is estimated to be about 20% in the primary market. This carryover would offset the decrease in production anticipated from the new crop so that as much oil will probably be on hand after distillation as was available at this time last year, in other words, a supply which is 20 to 25% greater than necessary to meet consuming needs during the twelve months.

The general concensus of opinion in the trade seems to incline toward a bearish attitude on the whole, and the belief is general that the price increase will not be maintained. Distillation will actually get under way during the next two or three weeks at which time it will be possible to get more definite information as to what production will actually be.

There were few takers in the market during the past few weeks for calendula petals. Prices have been adjusted to the basis of from 30c to 35c per lb. This reduction has not stimulated buyers to any extent with the result that an easy tendency still predominates. It is reported that 28c could be done on firm business.

Wormseed is easier at from $2.65 to $2.85 per lb. The primary market is not firm with stocks being offered for replacement at lower levels. It is reported that a firm order for a sizable quantity would shade the above quotations somewhat.

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ACID NEGATIVE

ALKALI NEGATIVE

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The latter test is probably the most *important.* The U. S. P. X. prescribes in the last named test that the C. P. Sulphuric Acid used in the test must not turn darker than "Pale Amber" and that the OIL remain unchanged in color.

In testing "ALBINOL" the C. P. Sulphuric Acid used does not even approach a "Pale Amber" and except for a "slight haze" *remains the same color as originally.* It is therefore **MUCH BETTER** than U. S. P. A comparative test against other oil is welcomed.

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REFINERY IN HAMBURG, GERMANY

Advance in Citrus Oils

CITRUS oils, which have long been one of the weakest spots in a generally declining essential oil market, have rather suddenly reversed themselves and during the past month have shown considerable strength.

Bergamot and lemon are the particularly strong items, with the former selling spot at from $2.00 to $2.25, and the latter Italian at from $1.10 to $1.15, and California at from 80c to $1.05. Italian orange is quoted spot at about $2.00 to $2.25 per lb.

Increased consumption in the largest consuming markets due to the prevailing warm weather which has greatly stimulated the sale of soft drinks has had the tendency to strengthen the primary market. Higher cables have been coming in from abroad so that prices on the spot have been advanced to offset the increased cost of replacement.

In a resume of the situation abroad, trade commissioner Elizabeth Humes, Rome, states that the current oil of bergamot season opened with a heavy carryover of oil from the preceding year. In spite of the fact that the production of the fruit was not as abundant as the record year 1929-30, and the trees did not receive the same care from producers, the output of oil during the current season is estimated at about normal. Formerly, foreign buyers placed their orders for bergamot oil early, so that most of the oil was sold before produced. This year, however, the general economic depression in buying markets, caused a considerable part of the oil to remain in the hands of producers. It is hoped by the producers that the Consortium of Bergamot Growers, which was formed this year, will be able to negotiate sales of the oil with foreign buyers.

Adverse conditions were net in the oil of lemon trade despite the destruction by storms and winds during February of about 40 per cent. of the ripe fruit. The general slackness during the producing season, together with the heavy carryover from last season, kept the price of lemon oil at the lowest levels ever reached.

The production of sweet oil of orange is said to be below average and considerably below last year. The price of the oil went so low that it did not pay producers to extract the oil and the fruit was therefore left on the trees to ripen. Transactions in mandarin oil have been unimportant.

It is reported that two chemists at Messina, working under the auspices of the National Research Council, have perfected important improvements in existing processes for machine extraction of lemon and other citrus oils. According to reports of the National Research Council the new process, which is patented, is giving excellent results. It is stated that one of the disadvantages of existing extraction methods is that the essential oil mixed with certain scrapings from the rind forms an emulsion with the washing water from which it can be separated only with great difficulty. In the course of the formation of the emulsion the essential oil loses one of its important constituents by solution in the water and deteriorates from the absorption of resinous and coloring matter, either originally present in the fruit rinds or produced in the mixture of water and essential oil by oxidation and other chemical processes.

It has been found that by careful addition to the water of a certain amount of sodium sulphate, sodium bicarbonate, or a mixture of these salts, an emulsion is obtained which is easily separated by centrifugation. The loss of citrol in solution and of other valuable substances contained in the essential oil is avoided, as well as oxidation and other chemical changes. Furthermore, the salt solution keeps much better than with the use of water alone. The exact proportion of the above sodium salts to be added to the water is not given, it being stated that the quantity may vary within certain limits.

Lime Stays High

Lime oil is without new feature. In view of the situation that has prevailed in this commodity for a long time the undertone is still very firm. Stocks are closely held, but in view of a restricted demand no outstanding price movements are noted.

During 1930 shipments from Trinidad to the United States of lime oil amounted to 8,600 pounds valued at $57,300, a substantial increase over the shipments of 1929, which amounted to 3,500 pounds, valued at $30,700. During the same period Grenada shipped no lime oil to the United States, although during 1929 Grenada shipments amounted to 4,300 pounds, valued at $30,200.

Citronella Up

Citronella oil is much firmer in the primary market with very little being offered. As stocks on spot were purchased at high cost any tendency to cut prices has ceased. Ceylon is unchanged from the schedule of from 40c to 42c per lb. but Java has been decidedly strong with price advancing to from 52c to 54c per lb. primarily on the strength in the primary market and increased cost for replacement. An increase in demand from New York has undoubtedly decided the producers to take a firm attitude.

Export of Citronella Oil from Java in Tons of 1,000 Kgs. net Weight

Exports during the month of April 1931 have amounted to *74 tons*. The figures are now:

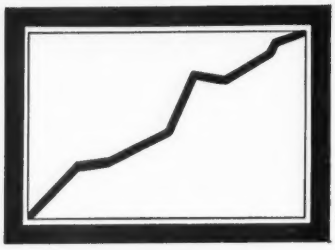
	1928	*1929*	*1930*	*1931*
January	104	67½	57	74
February	98	72	62	73
March	81	107	63	69
April	114	82½	79	64
May	184	121	63	74
Total Jan-May	581	450	324	354
June	109	43	48	
July	78	80	68	
August	77	77	86	
September	58	66	70	
October	91	55	68	
November	77	41	70	
December	69	55	81	
Total Jan-Dec	1,140	867	815	

Bois de Rose Firmer

Bois de Rose is very scarce in the primary market. The low cost at which this commodity had been selling, about 70c per lb., has decreased production as it was reported as below a level at which a profit could be made. As a result there now seems to be a scarcity of this oil with very little or none in production. The market has advanced about 20c per lb. on spot and is now offered at from 90c to $1.00 per lb.

Some dealers in geranium have shown a tendency to try and hold prices to higher levels. They have not been very successful, however, as rather keen competition has arisen keeping prices in buyer's favor. The spot market for Bourbon oil is from $3.75 to $4.50 per lb.

Coriander has declined to the basis of from $4.50 to $5.00 per lb. as to quantity. The raw material market is easier with demand small on the spot.



STRENGTH comes to-
Lemon Oil
Orange Oil
Bergamot Oil
Peppermint Oil

The past few weeks have witnessed much firmer markets on quite a few leading flavoring oils—oil peppermint and the citrus group particularly.

Italian producers of Lemon, Orange and Bergamot are now asking increased prices for all three of these oils, due no doubt, to the better seasonal demand. This increase represents the first serious reaction in price since the decline beginning in the early part of 1930. While spot prices have advanced somewhat, they have not kept pace with replacement costs. If the firm market continues in Italy, prices here must advance correspondingly.

Peppermint oil is much firmer in the country and on spot. Producers have advanced their prices on the basis of the prospects of a smaller crop this season. The mid-west heat wave of the past month or six weeks is said to have played havoc with the plants and a curtailed production of oil is anticipated as a result.

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Alcohol Developments

ALCOHOL continues in a routine way with distillers reported as adhering to published schedule of prices. Competition, however, among second hands is keen and there is a tendency on their part to shade prices in some cases below the figure at which alcohol is offered by distillers. This, however, is mostly single drum business.

Production is mostly under contract and although shipments against these contracts are reported as below normal the distillers are well satisfied with the situation as this business has been booked during the severe competitive break several months back and shows little or no profit, so they are not particularly anxious for large gallonage.

The feature of the market is the change during the month on formula number 5 completely denatured. Owing to complaints from industrial and other large consumers, the Treasury Department announced a new formula effective July 15.

Complaints arose from the nauseating odor of alcotate, a petroleum derivative, in the formula which was adopted last July, in which alcotate was substituted for wood alcohol. The new formula is said to be nonpoisonous in character.

For each 100 parts of ethyl alcohol of not less than 160° proof there shall be added for denaturing purposes 5 parts of denaturing grade isopropanol, 0.75 parts of a compound or one similar thereto known as aldehol grade A, 0.75 parts of alcotate and 0.25 parts of commercial alpha terpineol.

In the replaced formula there was one part aldehol, 1.25 parts alcotate but no isopropanol or terpineol. Government chemists expressed the belief that the new denaturants would prove just as effective as either of the two preceding formulas and the new alcohol would be more satisfactory to the consumers.

Another new formula has also been announced effective July 15, known as specially denatured alcohol formula No. 1-A, use of which is authorized for the manufacture of varnishes and shellacs. This formula requires:

To every 100 parts of ethyl alcohol not less than 160° proof, add 10 parts by volume of denaturing grade isopropanol, 0.5 parts by volume of commercial alpha terpineol.

These formulae are approved by Attorney General Mitchell.

Another recent development is a regulation requiring alcohol producers or agents to report daily all sales of completely denatured alcohol in lots of more than one drum. This regulation was issued by the Bureau of Industrial Alcohol and the Bureau of Prohibition.

This move followed a conference of officials with producers, who agreed to co-operate in preventing large shipments of completely denatured alcohol to possible diverters.

Menthol Off Further

MENTHOL has declined further and is now offered at from $3.35 per lb. to $3.50 per lb. as to quantity. Competition is still very keen. German crystals have appeared in this market made from Japanese oil at a price competitive with the Japanese crystals, although it is reported that not a pound of menthol from Japan has entered this market since January.

The fact that the Japanese have received no new business from this country—the largest consuming market—for a long time, undoubtedly leaves them with very large supplies on hand. Importers here are well supplied from stocks purchased some time ago at levels that show them a profit over spot quotations so that they are not influenced by the fact that the primary market is higher than the prevailing spot market.

The new crop is about ready for its first cutting so that there will shortly appear a considerable supplement to existing stocks held in Japan. This will undoubtedly aggravate an already weak condition in this commodity and it would appear that this is just what importers have been anticipating.

Late reports emanating from Japan state that bad weather has had a retarding effect on the new crop and that the first cutting will not exceed 10,000 kin, which is considerably below normal. This report also states that it has been necessary to cut the crop several weeks earlier than is usual in order to save it from further damage. Importers, who are well informed on the method of procedure in the Japanese market, are inclined to discredit these reports to a certain extent and look forward to an easy market for some time to come.

Phenolphthalein Cut 20c

Keen competition has developed in phenolphthalein with a very sharp reduction featuring the market in this commodity. Leading sellers are now offering the commodity at from 80c to 82c per lb. in 100 lb. drums, and from 88c to 93c in 5 lb. cans in lots of 100 lbs.

Possibly a reason for the reduction in addition to price competition was the report that one of the largest consumers would in future produce its own phenolphthalein.

Isopropanol Lower

Isopropyl Alcohol has been reduced approximately 23c per gal. The new schedule of prices is now 45c per gallon in tank cars, 55c in drum carloads, and 60c per gallon for single drums, drums included.

This commodity is now being used in denaturing the new formula number 5 alcohol. The sharp increase in consumption resulting from this new use brought about economy of production which makes the lower levels in price possible.

New Glycerin Low

The weakness in glycerin continues with a one half cent drop in price being made during the past month. This commodity is now at the lowest level it has reached since 1905. It is also reported that the undertone at this level is not firm. Demand has been lacking for a long time for both the crude and refined with the result that stocks are heavy. As crude glycerin is a by-product a market must be found for it with the result that the large producers let it go very cheap. At the prevailing level for C. P. however, their is very little profit for refiners.

Cream Tartar Down

Cream of tartar has been reduced twice during the past month with the domestic now being offered at from 22¾c to 23¼c per lb. Imported is offered at from 22½c to 23c per lb. Larger quantities of imported material have appeared in this market so that the competitive factor enters very largely into the cause of the reductions. The demand has been very quiet of late, but it is generally believed that the lower prices will bring out a more active buying movement.

Citric Acid Down

Citric acid has suffered a further reduction in price due to sharp selling competition and also due to the very depressed conditions abroad. While the situation is not one of real weakness, and the producers here are still in control of the situation, the decrease in consumption has caused some sellers to press too hard for what business there is in the belief that there is really more. The latest reduction amounts to 1c per lb., and quotations now stand at 35c per lb. for crystal and granular, and 35½c per lb. for powdered.

Arecoline hydrobromide has been reduced and is now offered at from $5.25 to $5.35 per ounce. Competition has been abundant and the market as a whole weakly supported on the spot.

Serpentaria root has been reduced 4c per lb. and is now being offered at from 36c to 37c per lb. Buying is in a small way and below normal for this season with the result that competition has shown a material increase.

TRY

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Mercury Weaker

MERCURY metal continues in the decline that set in several months ago. The domestic product is now offered at from $94.00 to $95.00 per flask. It is reported that the lowest price at which the imported product is offered is approximately $98.00 per flask.

It is interesting to note that the domestic product is about $4. per flask below the cost of the imported. American producers could easily hold this market at a variance in price much smaller than this but the competitive factor has entered into the situation as business is in a small way.

From a reliable source emanates some speculations as to the possible future trend of this commodity. It is reported that a further cut in price will be made by the foreign monopoly within the next three or four months and that by December the price will have dropped to a level of about $83.00 per flask. As production costs here are higher than abroad, and as the mines are not well financed, at this level of $83.00 it will be impossible for some of the domestic producers to continue in business with the result that production here will be curtailed considerably. The market will then be controlled by foreign goods.

When the large supply of mercury abroad, reputed to be 150,000 to 175,000 flasks, is taken into consideration, it can readily be appreciated that the Mercuric Europeo have in their hands the possibility of accomplishing this end at will.

Another prediction of considerable interest is that by September of 1932 the foreign monopoly in mercury will cease to exist. No reasons have been advanced for this prediction but it appears entirely reasonable in view of the situation. The Spanish mines are the largest producers and at a production price considerably below that of the Italian mines. In view of present world business conditions it is economically inadvisable for them to continue to be tied up with the Italian producers as the Spaniards can easily supply the largest consuming markets of the world at a lower price.

In spite of the much lower price for raw materials, mercurials on the whole remain unchanged in price.

Mercury bichloride, however, has run into rather stiff competition and a reduction has been forced upon producers. Crystals are now offered at $1.31 per lb. and the powdered at $1.27. It is very likely that, with the continued declining market for the metal, the producers of salts will, as soon as the raw material now on hand is worked into production, reduce the price of the salts in general line with the lower cost for raw material.

Essential Oils to Canada

Imports of essential oils into Canada have increased gradually from 375,893 pounds, valued at $663,367, during the fiscal period ended March 31, 1925, to 588,168 pounds, worth $1,107,672, in the fiscal year 1930. Canada is the second largest foreign market for United States essential oils. Purchases have been increasing steadily in recent years, suffering only a slight recession in 1930. Domestic exports of essential oils to Canada increased in value from $433,784, in 1927, to $488,925, in 1930.

To facilitate distribution of American essential oils in Canada, lists of consuming manufacturers have been compiled: Flavoring extract, toilet preparation, and toilet soap manufacturers; breweries, bottlers, and soft-drink manufacturers; and medicinal and pharmaceutical importers, dealers, and manufacturers, which will be furnished to qualified firms upon request to the Chemical Division. In addition, a list of commission merchants handling essential oils is available.

Cod Liver Oil Holds

COD liver oil is marking time during the warm months and is unchanged from existing levels that have now prevailed for several months. The undertone is firm with the possibility that as the consuming season approaches the shortage in production will be more keenly felt with a stronger tendency developing as a result.

The fishing is now finished. The total catch of cod is reported to be approximately 40,100,000, as against 61,600,000 in 1930 and 78,600,000 in 1929. The total production of medicinal oil this year amounted to 58,950 hectoliters, as against 78,338 in 1930 and 91,604 in 1929.

Production of cod liver oil in Norway during the month of May totaled 4,164 hectoliters, as compared with 18,076 hectoliters during April. For the week ending June 6, production was placed at 381 hectoliters, as contrasted with 800 hectoliters for the preceding week. It will therefore be seen that production has practically come to an end and existing stocks will have to see the market through the coming consuming season.

The "Indian and Eastern Druggist" reports that some time ago the Chief Chemist to the Tasmanian Government sent samples of mutton-bird oil and fat to the Imperial Institute with a request that they should be examined to see if there was any possible economic use for them. More recently a sample of the oil was received from the High Commissioner for Australia with a similar request. The mutton bird, it should be explained, is the short-tailed petrel.

The oil is clear, limpid, of a reddish-orange colour, with an odour resembling that of cod liver oil. On standing it deposits a very small quantity of stearine. In its chemical character the oil resembles sperm oil and might, say the Imperial Institute, be used as a substitute for it for lubricating and other purposes. It seems hardly likely, however, that the oil could be produced sufficiently cheaply to enable it to compete in the market with sperm oil at its present price. It is possible that the oil might have a use in medicine for similar purposes to cod liver oil, as it has been stated to contain vitamins A and D, and to be digestible, although it is of a wax-like nature.

Pyrethrum Dull

Pyrethrum flowers are reported to be plentiful in Japan, with buyers anxiously awaiting new crop developments. Due to this fact the spot market is comparatively dull with no change in quotations.

A Department of Commerce report states that the pyrethrum flowers market in Japan was quiet during the first three months with prices showing a slightly downward tendency. Stocks were plentiful, but buyers were delaying purchases until the present crop comes on the market in June. The 1931 crop is estimated unofficially at about 15,600,000 pounds, or an increase of approximately 10 per cent. over the 1930 output. It is reported that the acreage is considerably larger this year, and weather conditions favorable to date.

Total exports of pyrethrum flowers from the Kobe consular district, the principal territory of origin, during the first quarter of 1931, amounted to 1,070,000 pounds valued at $163,000, a decrease of 467,000 pounds in volume and $152,000 in value when compared with the exports during the first quarter of 1930. Decreased demand in the United States was stated as chiefly responsible for the decline.

Agar Strong

The Japanese market for agar continues strong with stocks reported below normal. Buying in the primary market has been very good. Production has been reduced due to the fact that severe storms washed considerable quantities of weed out to sea and made it difficult to collect. Difficulty has also been experienced in drying the weed due to the inclemency of the weather so that production is well below normal. Replacement costs would justify an advance in the spot market although no increases have been noted during the past month. A fair demand exists on spot. The current market is from $1.10 to $1.15 per lb. for No. 1 and from $1.00 to $1.05 for No. 2.

Star anise is higher by ½c per lb. and is now offered at from 10½c to 11c. Demand is quiet, the increase reflecting a somewhat higher cost for replacement. Spanish remains unchanged.

Manufacturers and Importers of Essential Oils, Flower Oils, Aromatic Chemicals, Perfume Materials, Flavors

A Reminder to Manufacturers

Success in making and marketing cosmetics, or any perfumed or flavored preparation, differs but little from success in any similar line. If you are now making proprietary articles, the same general principles apply.

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Give the best value you can
Merchandise intelligently
Package attractively
Scent or flavor properly
Help dealers move goods
Price your line right

We are prepared to assist manufacturers with counsel and advice. Years of contact have given us an appreciation of the public's tastes and a knowledge of the market for many types of preparations.

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News

Regulatory

Government Boosts Drugs

Of considerable interest to drug manufacturers was the statement issued on June 30 by W. G. Campbell, chief of the Federal Food and Drug Administration, on the occasion of the silver anniversary of the Federal Food and Drugs Act. Chief Campbell lauded the regulatory work of the government in enforcing the Act, claimed the credit for the Act of improvement in manufacturing processes, and attributed to the Act and its able enforcement the tremendous increase in size of both the food and drug industries.

Said he, "Before the law was passed the food and drug industry picture was in the chromo stage . . . The passage of the pure food law marked the beginning of a great change for the better in food and drug manufacturing.

Government scientists devoted attention to the formulation of analytical methods, and other Federal officials seized products found to be in violation of the law, prosecuted offenders, or educated the trade in improved processes. The public, losing much of its earlier distrust, increased its purchases progressively with improvement in quality of the goods. This was to the profit of business. The old cry, 'The Government is ruining our business,' became less common. From comparatively small beginnings, the food industry grew to a business which manufactures food products amounting annually to several billion dollars in value. Concurrently, there was a growth in the drug manufacturing business, whose annual products are worth nearly $400,000,000."

BANNED DISEASE NAMES

During the previous week, Administrator Campbell had issued a list of diseases implying, although being careful not to state, that, so far as the Administration was concerned, for these diseases there were no medicinal preventives or treatments. This ultimatum to drug manufacturers is quoted in full.

Notice to Manufacturers of Medicinal Preparations:

"It is the purpose of the Food and Drug Administration to continue vigorously its program of action under the Federal food and drugs act against medicinal preparations falsely and fraudulently represented by label or circular accompanying the package as preventives or treatments for disease conditions.

"In determining whether therapeutic or curative claims are true or false, the Administration is guided by the consensus of current medical and dental opinion as to the effectiveness of the ingredients of the product.

"Extensive surveys during the past year have shown that many products are on the market bearing label claims which their compositions do not justify. Some of the diseases for which unwarranted claims have been noted are:

"Arthritis, Rheumatism, Gout, Sciatica, Joint disorders; Appendicitis, Cholera Morbus, Cholera Infantum, Dysentery; Kidney and Bladder disorders, Albuminuria, Dropsy, Cystitis, Nephritis, Pyelitis, Uremia, Bright's Disease, Prostate disorders, High Blood Pressure; Angina Pectoris, Heart Disease; Bone Diseases; Blood Poison, Cancer, Carbuncles, Ulcers, Erysipelas, Scrofula, Varicose Veins, Eczema, Psoriasis; Chicken Pox, Mumps, Measles, Small Pox, Meningitis, Scarlet Fever; Chorea, St. Vitus Dance, Convulsions, Epilepsy, Hysteria, Melancholia, Neuralgia, Nervous Disorders; Tonsilitis, Quinsy, Sore Throat, Diphtheria, Bronchitis, Laryngitis, Catarrh, Asthma, Hay Fever; Female Remedies, Amenorrhea, Ovarian & Uterine diseases, Menstrual disorders, Vaginal diseases, Leucorrhea, Venereal diseases (Male or Female); Influenza, La Grippe, Pleurisy, Pneumonia, Sinus affections, Tuberculosis; Gall Stones, Liver Disorders, Stomach Ulcers, Gastritis, Gastor-Enteritis, Acidosis; Goitre; Hernia; Anemia, Pernicious Anemia, Male & Female Rejuvenators; Pollagra; Malaria; Pyorrhea, Trench Mouth.

"The responsibility under the law for compliance with its provisions rests squarely upon the manufacturer or shipper. Manufacturers whose products bear label representations for these disease conditions or for other serious maladies should carefully consider whether or not their claims are justified in the light of present scientific knowledge."

Durrett and U. S. P. XI

Dr. James J. Durrett attended the conference of the U. S. P. XI revision committee at Pocono, Pa., June 26-27, and is understood to have come to an agreement with the committee as to how the exemption of goods below U. S. P. standard are to be handled in the next revision. It was admitted that some exemptions are necessary and a plan was worked out by which these will be handled through individual monographs under the particular commodity at issue, thus eliminating general exemptions.

Raladam Case Appeal

Federal Trade Commission has filed with the Supreme Court of United States a motion that the court modify its judgment in the so-called Raladam case, involving the Commission's statutory jurisdiction, so as to provide that further proceedings may be had and evidence taken in the case to support the Commission's claim of unfair trade practices.

The object of the motion, according to a brief filed in support of it, is to permit the Commission to reopen the proceedings for the purpose of hearing evidence bearing upon the existence of competition and injuries to competitors and for making such further findings and order as the additional proof may warrant.

New C. D. 5 Formula

Completely denatured alcohol formula No. 5 has been revised as follows to meet objections from industrial users regarding odor:

To every 100 parts by volume of ethyl alcohol of not less than 160 degrees proof, add five parts by volume of denaturing grade Isopropanol; .75 parts by volume of a compound or one similar thereto known as Aldehol Grade A; .75 parts by volume of the compound or one similar thereto known as Alcotate; .25 parts by volume of commercial Alpha Terpineol.

C. D. Alcohol Reports

Alcohol producers and agents must report daily all sales of completely denatured alcohol in lots of more than one drum by an amendment (T. D. No. 4) to Article 114 of Regulations No. 3.

Doran's Trip

Dr. James M. Doran, alcohol commissioner, has been in Europe attending the narcotic conference and studying alcohol control methods of several European countries.

F. T. C. Cites Newton

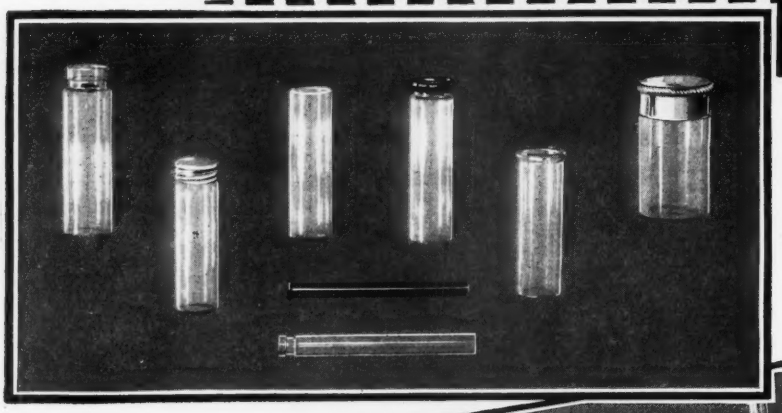
Federal Trade Commission has issued complaint against Fred F. Smith, Toledo, trading as "Newton Remedy Co.," and "Newton Horse Medicon Co.," charging untruthful advertising.

Olive Oil Duty

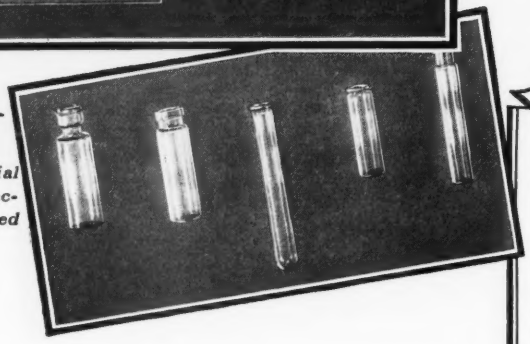
President Hoover has approved report of U. S. Tariff Commission under section 336 of the tariff act of 1930, recommending that the duty provided for in paragraph 53 of that act for olive oil, weighing, with the immediate containers less than 40 pounds

KIMBLE VIALS

AUTOMATIC MACHINE-MADE



Standard types of Kimble Vials, showing various forms of caps. The Perfume Vial and Hypodermic Tablet Vial appear in lower center.



Typical Kimble Vials with special tops and bottoms. Complete specifications and prices are furnished upon application.

KIMBLE GLASS PRODUCTS FOR DRUG, PHARMACEUTICAL AND PERFUME INDUSTRIES

1. Pharmaceutical Vials of Standard and Special Types
2. Perfume Vials
3. Hypodermic Tablet Vials
4. Serum Vials
5. Ampoules
6. Menthol Inhalers
7. Medicine Dropper Glasses
8. Ligature Tubes
9. Show Bottles

etc., etc.

The fabrication of good vials is an art requiring extreme attention to detail and uniformity — and this is best secured by *automatic machinery*.

Kimble Vials are entirely automatic machine-made from tubing of uniform diameter and wall thickness, drawn from a continuous furnace. They are carefully processed and then retempered for maximum strength. They have the greatest possible uniformity in height and accuracy in corkage.

We are always glad to offer suggestions for the design and selection of attractive caps or closures to fit your particular vial requirement. Consult us at any time — there are no obligations involved.

KIMBLE GLASS COMPANY

Principal Office and Plant, Vineland, N. J.

Branch Offices:

New York . . . . . 1440 Broadway
Philadelphia . . Public Ledger Building
Boston . . 131 State Street
Chicago . . . . 402 W. Randolph Street
Detroit . . . General Motors Building

K
KIMBLE GLASS

THE VISIBLE GUARANTEE
OF
INVISIBLE QUALITY

KIMBLE

EXAX GLASSWARE OF ASSURED ACCURACY NORMAX

be reduced from 9-½ to 8 cents per pound on contents and container.

Bath Tablet Duty

Protests of American Shipping Co. and C. F. Wunderlich Co., New York, regarding duty on certain pine needle bath tablets have been sustained, Customs Court holding that they were errorneously taxed at rate of 75 per cent. ad valorem, under paragraph 61, and should have been levied at rate of only 25 per cent. ad valorem under paragraph 5, act of 1930.

Dried Egg Tariff

Duty on dried egg products has been increased fifty per cent. from 18 cents to 27 cents per pound effective July 24.

Vitamin Patent

U. S. Court of Customs and Patent Appeals has upheld the right of Benjamin Eicher to a patent inventing a form of cod liver oil tablets. Patent was granted December 8, 1925 for a "method of forming a dry medicinal agent, containing active extracted ingredients of cod liver oil." Court ruled that Eicher, now manager, Stearns & White Co., put his invention into practice in 1920, while the rival claimants, Archibald W. Larson and William S. Campbell did not put their invention into practice until 1921.

O. K. Milk of Magnesia

Federal Food and Drug Administration has completed a survey of milk of magnesia on the American market, including every brand found in interstate commerce, and now reports that careful analysis failed to disclose any harmful or deleterious ingredients in any of the brands analyzed.

"We found the milk of magnesia of uniformly good quality and the investigation did not disclose any that would be actionable under the Federal Food and Drugs Act," said W. G. Campbell, Director of Regulatory Work, Department of Agriculture. "The investigation was instigated by recent advertisements of a certain manufacturer of this pharmaceutical, implying that brands of milk of magnesia produced by other concerns were of low grade.

"Milk of magnesia is described in the United States Pharmacopoeia, the book of standards which the Federal Food and Drugs Act makes the official guide for all the drugs listed in it. Drugs sold under unmodified names mentioned in the Pharmacopoeia are required to conform to its provisions. The Administration did not find a single sample of milk of magnesia which, after careful analysis, warranted legal proceedings under the food and drugs law. As a matter of fact, there are few drugs on the market upon the quality of which the purchaser can rely more implicitly than milk of magnesia. The product is comparatively easily manufactured, since the process of manufacture is simple, and is made of inexpensive ingredients."

Company News

McK. & R. Name Changes

McKesson & Robbins, Inc., has announced the formation of eight new subsidiary companies, all of which will take over branches previously operated by existing subsidiaries. These steps were taken for the purpose of placing these properties under direct supervision of the parent organization and to eliminate confusion in branch designations.

The new companies organized are the McKesson-Buffalo Drug Co., Inc.; McKesson-Rochester Drug Co., Inc.; McKesson-Syracuse Drug Co., Inc.; McKesson-Eisen Drug Co., Inc.; McKesson-Littell Drug Co., Inc.; (Manhattan); McKesson-Bronx Drug Co., Inc., and the McKesson-Brooklyn Drug Co., Inc. All of the plants which will be taken over by the respective companies were previously under the supervision of the McKesson-Gibson-Snow Co., Inc., which will continue to operate the properties in Albany.

The parent company also organized the McKesson-Springfield Drug Co., Inc., and the McKesson-Providence Drug Co., Inc., which take over branches previously supervised by the McKesson-Eastern Drug Co., Inc., which will continue to operate in Boston and surrounding territory.

Standard--California Spray

Standard Oil Company of New Jersey is reported from authentic sources to be taking over the California Spray Chemical Co., Berkeley, Cal., manufacturers of agricultural insecticides. The actual announcement of the merger s stated to be delayed due to the fact that patent rights as well as other companies are involved. The interest of Standard Oil in this merger is said to lie in the fact that emulsified petroleum oils are now largely used in plant sprays and thus this will furnish an additional outlet for petroleum.

New Products

FLIT CREAM

Stanco, Inc., New York, ("Flit," "Nujol," "Mistol") has added a new item to its line, "Flit Insect Repellent Cream," said to inure exposed parts of the body against insect attack.

D'ORSAY PERFUME

Parfums d'Orsay of Paris is reported to be planning to introduce a new perfume in the popular price range backed by a substantial advertising campaign.

BURNTONE & ORA

McKesson & Robbins, Inc., Bridgeport, has added two more products to its line "Burntone" for sunburn and other burns, and "Ora" a new deodorant.

VI-ZOY FOOD

Harshaw Essential Foods, Inc., Cleveland, is marketing a new product, "Vi-Zoy," a chocolate-flavored food drink, through retail drug outlets.

QUO SHAVE

General Products Corp., Pittsburgh, has introduced a new shaving cream, "Quo." Ketchum, MacLeod & Grove, that city, are handling the advertising.

MYCOZOL

Parke, Davis & Co., Detroit, has introduced a new ointment, "Mycozol," for the treatment of epidermomycosis (athlete's foot).

MEAD'S CEREAL

Mead Johnson & Co., Evansville, Ind., infant foods, is introducing a new product, Mead's Cereal, exclusively through drug store outlets.

LADIES' TOES

Wilson Products Co., New York, has introduced a new toe nail polish, "Sta-Nice Femtoe."

Packages

SQUIBB ETHER

E. R. Squibb & Sons, Brooklyn, has installed a complete electro-plating outfit in the can manufacturing department of its plant in New Brunswick, N. J. This installation has been completed as part of a program for improving the container for ether, both from the point of view of maintaining the purity of the ether through complete supervision the manufacture of the container as well as from the point of view of improving the package for the doctor's use. Previously Squibb, manufactured its ether cans using copper-plated tin but now the can will be made and copper-plated all under the supervision of the company.

ESSENTIAL OILS

Magnus, Mabee & Reynard, Inc., New York, has improved its packages as used by the retail drug trade by using a new, embossed stopper with the company trademark on top. The new stopper is said to be more convenient and to eliminate possibility of mistakes and contamination in the prescription department through its easy identification.

OINTMENT JAR

Eli Lilly & Co., Indianapolis, has adopted a new one-pound ointment jar of amber glass.

Johns Hopkins University is the subject of the leading feature article in the magazine section of The Baltimore Sun, June 21.

YOU'LL FIND THE *RIGHT CLOSURE* HERE

for

EVERY BOTTLE . . .
EVERY PRODUCT

SIX different types of closures are in this picture, and yet it doesn't show half the varieties of Armstrong's Closures.

Reading from left to right, first is a Du Pont Beverage Band for crown-sealed packages. Then, an Armstrong's Embossed Top Cork (hardwood top specially designed and decorated). Next an Armstrong's Cork with a Du Pont Cellulose Cap, another Embossed Top Cork, and a plain cork, again.

Beneath the Du Pont Cellulose Cap on the Pinaud bottle in the foreground (you won't guess it) is an Armstrong's Cork. An attractive closure, isn't it? Last but not least important is the Armstrong's Artmold Cap on the Armand bottle—one of the many shapes in which these caps can be molded to match the package design.

Send us your bottle and let us help you select the right closure for your purpose. Samples and prices of any of the closures listed below furnished on request. Armstrong Cork Company, 913 Arch Street, Lancaster, Pennsylvania.

Armstrong's Closures

CORKS OF ALL KINDS . . . ARTMOLD CAPS . . . EMBOSSED TOP CORKS . . . DAUBERS . . . CROWNS . . . CELLULOSE CAPS
CELLULOSE BEVERAGE BANDS . . . APPLICATORS OF ALL KINDS . . . RUBBER STOPPERS . . . CAP LINERS . . . BUNGS

Contempt of Court

Tru-Lax Corp., Newark, has been found by the U. S. District Court of New Jersey to be in contempt of an injunction decree of that court restraining it from marketing a product in packages imitative of those used by the Ex-Lax Manufacturing Co., Brooklyn.

Paraldehyde

Niacet Chemicals Corp., Niagara Falls, N. Y., has announced production of a grade of paraldehyde conforming to all the requirements of the U. S. Pharmacopoeia. It was erroneously reported in these columns last month that the product was formaldehyde and it is for the purpose of calling attention to that error that this correction is being made. Niacet's new paraldehyde is for the pharmaceutical and medicinal trade.

Santochlor

Monsanto Chemical Works, St. Louis, has improved the size of its paradichlorobenzene crystals offered under the trade name, "Santochlor." The new crystal is said to lessen the tendency to "set up" in warm weather.

Marinello Injunction

Marinello Co., New York, toilet goods, has secured a permanent injunction restraining Elizabeth B. Hafner, Miami, from using the word "Marinello" as a trade mark, trade name or in advertising.

Powell Lab.

John Powell & Co., New York, have taken additional space on the same floor of 114 E. 32 st., into which they have moved their research laboratories under direction of Dr. Alfred Weed, entomologist. A larger and more suitably located laboratory as well as necessary increased space for the offices of the company are the results.

Construction

SOUTHERN ALKALI

Southern Alkali Corp. plans construction of $10,000,000 plant at Corpus Christi, Texas. A similar development is that of the Texaco Salt Products Co. which plans erection of a $2,000,000 chemical plant at West Tulsa, Okla.

Southern Alkali Corp. is owned jointly by Pittsburgh Plate Glass Co., Barberton, Ohio, and American Cyanamid Co., New York. H. A. Galt, manager of the Columbia Chemical division of Pittsburgh Plate Glass, is president of the company.

BRAUN CORP.

Braun Corp., Los Angeles, laboratory supplies and fine chemicals, is constructing a new $250,000 building, two stories high, which will be ready for occupancy about September 1.

ELLICOTT DRUG

Ellicott Drug Co., Buffalo, cooperative buying association of retail druggists, has opened its new $100,000 warehouse in that city.

ART TUBE

Art Tube Co., Irvington, N. J., has taken over the building adjoining its present plant in order to increase productive capacity.

Branches

ROSSVILLE ALCOHOL

Rossville Commercial Alcohol Corp. has removed its sales office and warehouse from the Bush Terminal, Brooklyn, N. Y., to its plant, 2323 Blanchard st., Newark, New Jersey.

PRINCESS PAT

Princess Pat, Ltd., Chicago, beauty preparations, has appointed D. C. Stone & Co., Ltd., London, as sole distributors for Great Britain and Ireland.

PRIMROSE HOUSE

Primrose House, New York, toilet goods, has appointed N. W. Wilson, Los Angeles, to take charge of its Western territory. He was formerly associated with Lambert Pharmacal Co.

U. S. ALCOHOL

U. S. Industrial Alcohol Co. and U. S. Industrial Chemical Co., New York, have moved their Chicago offices to Fifteenth st. and South Western ave., that city.

GLYCO PRODUCTS

Glyco Products Co., Bush Terminal building, Brooklyn, resinates, stearates, etc., has appointed L. H. Carlson, Detroit Savings Bank building, Detroit, to handle sales to the drug, cosmetic and allied trades in that territory.

TRE-JUR

House of Tre-Jur, New York, announces removal of its Chicago branch office to 1136 Merchandise Mart, that city.

R. & H.

Roessler & Hasslacher Chemical Co., New York, has been appointed selling agent for alcohol manufactured by Eastern Alcohol Corp., Carney's Point, N. J. Both companies are du Pont subsidiaries.

Eczema Products

Bilhuber-Knoll Corp., Jersey City, has introduced two new products for the treatment of eczema, "Lenigallol" powder and "Lenigallol" zinc ointment.

Alcohol Chart

U. S. Industrial Alcohol Co., New York, has prepared a chart, showing, "Important Uses of Industrial Alcohol." Copies are available upon request to the company at 60 East 42 st., that city.

Central Buying

Druggists Supply Corp., New York, has completed plans by which it has arranged to buy proprietary medicines for the 122 service wholesale druggists which comprise its membership. Previously the organizations buying had been restricted to raw materials and sundries.

Name Changes

PALO-MYERS

Teschner-Myers Co., New York, laboratory supplies has changed its name to Palo-Myers Co.

MUNDET CORK

L. Mundet & Son, New York, has changed its name to the Mundet Cork Corp. This involves no change in policy or in personnel.

In Empire State

Grasselli Chemical Co., and Roessler & Hasslacher Chemical Co. have moved their New York offices to the Empire State building, that city.

New Office

Billy B. Van's Pine Tree Soap Co., New York, has leased sales offices at 232 Madison ave., that city.

Only One Branch

Armstrong Cork Co., Lancaster, Pa., has consolidated all its Cincinnati branch offices at 232 West Seventh St., that city.

Removal

Ferstl & van der Burgh, Rotterdam, Holland, crude drugs, has moved into larger quarters at Verlaatstraat 52-56, that city.

Aluminum Sues

Aluminum Co. of America, Pittsburgh, has filed suit against the government asking the return of about $1,000,000 in income tax payments and interest.

Hydrogen Peroxide

Schering-Kahlbaum A. G., Berlin, together with J. D. Riedel-E. de Haen A. G., has founded the Elchemie G.m.b.h., which has taken over from Alpine Chemische A. G. in Kufstein-Schaftenau, a plant in which it is intended to produce hydrogen peroxide by a new method, the Loewenstein process.

Joins Owens

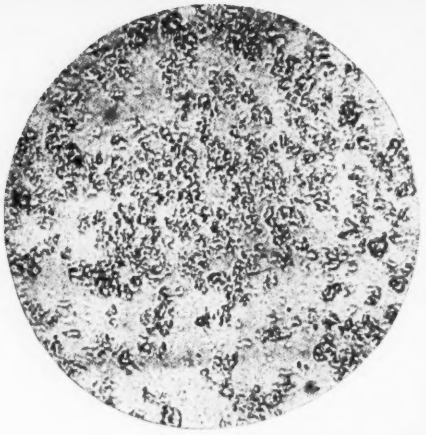
Owens-Illinois Glass Co., Toledo, announces addition of J. S. Irvine, formerly with Spicer Manufacturing Corp., to staff.

Cod Liver Oil Extract

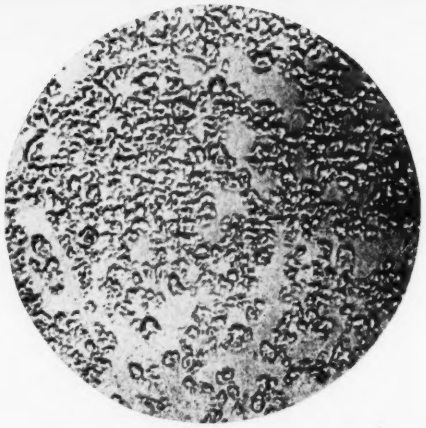
Clinadol Co., Inc., New York, is marketing a new liquid preparation, "Clinadol" cod liver oil concentrate.

STURGE'S STANDARD

FOR FIFTY YEARS



Grade 3
Sturge's Standard Precipitated Chalk



Grade 4
Sturge's Standard Precipitated Chalk

PRECIPITATED CHALK

When a tooth paste formula is fixed, it follows that the chalk content of each tube is fixed, so that as the consistency of the paste can not vary there is only one suitable grade of chalk available.

Sturge's Precipitated Chalk is manufactured to a specific density—a standard which always meets the requirements of the tooth paste formula.

In a "Guide to the Buying and Use of Precipitated Chalk by means of Sturge's Standards," several graphs are shown which will help the manufacturer select the chalk which will give the results he desires and enable him to accurately forecast the quantity of paste he will obtain from a carload of Sturge's Tested Chalk.

May we send you a copy of this book ?

STURGEON BRAND
REGISTERED TRADE MARK

Sturge's Standards:

Uniform
Gritless
Fluffy
U. S. P.
White
Unadulterated
Manufactured
(not a by-product)

JOHN & E. STURGE, Ltd., Birmingham, England

Distributors:

H. J. BAKER & BRO.
271 Madison Ave., New York, N. Y.

FOR A GOOD TOOTH PASTE

People

Pitman-Moore's Brownie

Unnoticed by many of the drug trade was the fact that the Merrill J. Browns of Indianapolis had been selected by "The American Magazine" as the typical American family. Merrill J. Brown is sales manager of the Pitman-Moore Co., Indianapolis, pharmaceuticals, and his family was chosen because it most nearly fitted the description of a typical family given by 22,000 persons questioned at random. The description decreed that the typical family should have certain definite qualifications. The Browns have them.

They are a family of four (U. S. census statistics quote 4.2 persons per family as the average); they live in a city (populations drift for thirty years has been towards the cities; currently 56 per cent. reside in urban districts); they have a moderate income (about $5,000); the family is entirely supported by the father; they "started from scratch and made good."

The Browns are fond of motoring (to date they have worn out six automobiles), they give their children allowances to be spent as desired, they all play and like both golf and tennis, they think that the "first ambition of the typical American family is to have a nice home." The Brown home is an 8-room frame house, with bath, steamheat, electric sweeper, washer and ironer, automatic refrigerator, telephone, radio. Of the management of their income Mrs. Brown says, "We have never used a budget," to which Mr. Brown adds, "When there is something we think we need . . . we get it, if it is something we can afford."

Higdon's Boy

Harry J. Higdon, advertising manager, Phoenix-Hermetic Co., Chicago, has announced the birth of a son, Harry John Higdon, alias Hig the Second. He announced this interesting event by publishing a four-page miniature tabloid, "The Daily Yell", with the screaming banner head, YOUTHFUL CHICAGO BANDIT BREAKS INTO S. SHORE HOME. Interesting features are the lead story, "Capture Dangerous Criminal," a footprint of Hig the Second, Public Enemy No. X, a composite picture of the young outlaw's mother and father taken at a very young age, Household Helps, and Advice to the Lovelorn.

J. Van Velsor Smith

J. Van Velsor Smith has resigned as secretary of Peek & Velsor, Inc., New York, crude drugs, after fifteen years of association with that company. He is establishing an office at 35 Water st., New York, and will act as a manufacturers' export agent for firms in the drug and allied lines. He now represents Flatbush Gum Co., Brooklyn; Scientific Manufacturing Co., Scranton; Parfumerie Darette, Baltimore; Myers Manufacturing Co., Camden; Solon Palmer, Inc., New York; and expects to add other lines in the near future.

Fink Abroad

J. H. A. Fink, export manager, John Powell & Co., New York, pyrethrum, is leaving July 25 on an extended business trip through South America. His itinerary includes Brazil, Argentina, Chile, Peru, Columbia, Venzuela and Panama.

The Four Browns
Typical American Family

Priceless Ingredient

Theodore Weicker, executive vice-president, E. R. Squibb & Sons, is the subject of an article entitled, "That Which Cannot Be Bought or Sold", in the June issue of "Young Men", published by the Young Men's Christian Association.

Swann Speaks

Theodore Swann, president of the Swann Corp., Birmingham, Ala., was one of the speakers on the South's place in national industrial preparedness at the Institute of Public Affairs, University of Virginia, July 6-11.

Hayward Joins Wyeth

L. B. Hayward, at one time with Parke Davis & Co., has been made manager of the John Wyeth & Bro. plant, Philadelphia, recently taken over by American Home Products Corp.

Tobey Directs "Klim"

Dr. James A. Tobey has been placed in charge of the Merrell-Soule division, Borden Co., New York, distributors of "Klim", a powdered whole milk, powdered lactic acid milks, and protein milks.

LaCombe with Leland

Fred E. LaCombe, formerly with Lavo Vo., Milwaukee, has become associated with the Leland Chemical Co, that city, as sales manager.

Barradale with Shoemaker

C. D. Barradale, formerly advertising manager, The Mennen Co., Newark, N. J., has become associated with the F. M. Shoemaker group, Elmira, N. Y., (Frostilla, Pompeian, Scott & Bowne—the two latter with Harold Ritchie).

L. K. Liggett, D. Ph.

Louis K. Liggett, chairman of the board of Drug, Inc., and president of United Drug Co., Boston, has been presented with an honorary degree of doctor of pharmacy by the Rhode Island College of Pharmacy and Allied Sciences.

Allied Chemical Changes

Clinton S. Lutkins, vice-president, director, and a member of the executive committee, Allied Chemical & Dye Corp., New York, and George M. Wells, vice-president of the corporation in charge of sales, have resigned from their connections with the company. They are understood to have represented the Nichols interests on the board.

Allan Brown Elected

Allan Brown, advertising manager, Bakelite Corp., New York, has been elected president of the National Industrial Advertisers Association.

The NEW CROWN LUG CAP

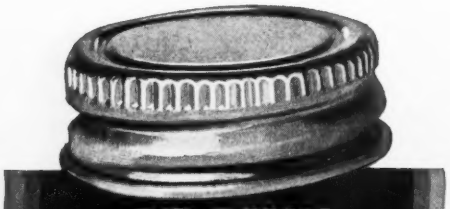
IT is winning immediate acceptance among manufacturers of glass packed products because it sets a standard of sealing efficiency never before attained in this type of closure.

NEW BEAUTY OF DECORATION

Of almost equal importance is the rich beauty of decoration made possible by fine lithography and new manufacturing methods. Trade-marks, designs and colors to harmonize with the most distinctive packages are reproduced with faithful accuracy and pleasing finish that adds to the attractiveness of your package.

Write us for samples of Crown Lug Caps. Note the rich beauty of decoration. Test their superior sealing efficiency in your own plant. Then, and only then, can you appreciate the advantages they offer.

Our splendidly equipped Art Department will cooperate with you in creating designs to give your product greatest sales appeal. We invite you to make full use of this service.



CROWN SCREW CAPS

An improved type of screw cap that will not ride, lock or jam. Its new and exclusive features reduce friction and greatly increase sealing pressure. Write for samples and full information.

Look to "Sealing Headquarters" to provide you with *the right closure for your product.* Our Research Laboratories are unsurpassed in completeness of equipment and the service they can render. These facilities are at your disposal, without obligation, to aid you in determining the method of packaging that best meets your requirements.

Container Cap and Service Division

CROWN CORK & SEAL CO. BALTIMORE, MD.

▼ ▼ *World's Largest Makers of Bottle Caps and Closures for Glass Containers* ▼ ▼

Abbott Promotes Drach

Since 1910 in charge of the purchasing department of Abbott Laboratories, North Chicago, Edmund L. Drach has been elected a member of the board of directors of that company. He has been with the company since September 1904 and for over five years was in the manufacturing division. He has always had charge of

Edmund L. Drach

Abbott's purchasing department since his appointment to that office was coincident with the department's founding. He is forty-three, a native of Chicago, a graduate with an LL.B. of that city's Kent College of Law, a member of the Chicago Drug & Chemical Association; Purchasing Agent's Association; Phi Delta Phi, and A. F. & A. M.

Arthur G. Cailler, formerly New York importer of menthol, and his family have re-opened their villa at Nice, France, and expect to spend the summer season there.

J. Baxter Gardner, formerly with Don Watts Advertising, Inc., Tulsa, Okla., has joined the advertising department of The Pepsodent Co., Chicago.

Clarence Voneman, formerly with Griswold-Eshleman agency, Cleveland, has been made advertising manager, Ohio Chemical Co., that city.

Oliver F. Benz, director of sales, Du Pont Cellophane Co., New York, has been elected president of the Sales Managers' Club, that city.

A. L. Diedrich, Jr., formerly with the American Cyanamid Co., New York, has become advertising manager, Quigley Co., Inc., that city.

H. A. Truslow, vice-president, Armstrong Cork Co., Lancaster Pa., has been elected treasurer, succeeding the late W. H. Larimer.

Charles M. Pritzker has resigned as advertising manager, Gillette Safety Razor Co., Boston.

Charles McCallum has resigned as vice-president in charge of store operations of the Louis K. Liggett Co., Boston.

Obituaries

Lord Trent

Lord Trent of Nottingham, formerly Sir Jesse Boot, founder of the British retail drug store chain, "Boots Cash Chemists," died June 13, aged 81. He was born in Nottingham, England in June, 1850 and presented an innovation in England when he started his "chemists" business, as his shops were the present-day variety-stocked drug stores. Today the business, centrally the Boots Pure Drug Co., established in 1888 and now controlled by Drug, Inc., through the United Drug Co., Boston, is a manufacturing and retailing enterprise with five or six units and 770 stores, and earning more than £700,000 net annually. Its capital is about £5,000,000. His son, the Hon. John Campbell Boot, is chairman of the board of the Boots Pure Drug Co.

G. H. Neidlinger

George H. Neidlinger, founder of the Peerless Tube Co., Bloomfield, N. J., which he started twenty-seven years ago, and of which company he was president until his retirement two years ago, died at Mystic, Conn., July 8, aged 60. He was a pioneer in the manufacture of collapsible tubes and the first to introduce a lithographed tube in the United States. Prior to that time all collapsible tubes were made with a plain finish and labels pasted around them. He was past president of the Manufacturers Club of Bloomfield, and actively engaged in church and community activities at his home in East Orange, N. J.

Robert J. Ruth

Robert J. Ruth, founder of "Pharmacy Week" and since 1927 director of the pharmaceutical division, E. R. Squibb & Sons, died in a Baltimore hospital, July 4, aged 40. He was born in Bellevue, Ohio, February 19, 1891, was graduated from the Philadelphia College of Pharmacy and Science in 1913, and spent the next three years as member of the pharmaceutical faculty, Southern Methodist University, Dallas, Texas. Later, until 1923, he operated two retail drug stores in Elyria, Ohio, when he disposed of them to become traveling secretary of the Alumni Association of the Philadelphia College of Science and Pharmacy.

Linford P. Faucett

Linford P. Faucett, one-time secretary-treasurer of the H. K. Mulford Co., manufacturing chemists, Philadelphia, died at his home in that city, June 21, aged 57. He became associated with the H. K. Mulford Co. in 1895, serving as treasurer for a number of years and holding the joint positions of secretary and treasurer when he retired in 1930 upon consummation of the merger with Sharp & Dohme.

H. C. Lincoln

Harry C. Lincoln, at one time treasurer of Robert Shoemaker & Co., Philadelphia, wholesale druggists, before its amalgamation with Valentine H. Smith & Co., died in Philadelphia, June 30, aged 73.

M. E. Jaffa

Dr. Myer Edward Jaffa, authority on nutrition and director of the Food and Drugs Bureau, California Board of Health since 1925, died at his home in Berkeley, June 28, aged 73.

Mrs. A. C. Cole

Mrs. Ada C. Cole, wife of Harry W. Cole, vice-president of Baird & McGuire, Inc., Holbrook, Mass., disinfectants, died June 23 at Quincy, Mass.

W. H. Larimer

William H. Larimer, treasurer, Armstrong Cork Co., Lancaster, Pa., died in that city, June 22, aged 50.

J. McC. Johnson

James McClain Johnson, manager, Standard Specialty & Tube Co., New Brighton, Pa., died June 29, in that city.

William Neuberg

William Neuberg, New York importer and exporter of citric and tartaric acids for the past twenty-seven years, died at his home in Riverdale, N. J., June 29, aged 63.

T. M. Walker

T. M. Walker, formerly president, McPike Drug Co., Kansas City, died July 7, aged 84.

Associations

Price-Cutting

California Pharmaceutical Assn. has adopted a resolution seeking the aid of drug manufacturers in remedying retail price cutting. Of chief interest to manufacturers are the following clauses: that they discontinue (1) selling to predatory price cutters; (2) quantity discounts; (3) free deals; (4) cooperative advertising; (5) hidden demonstrators; and that each manufacturer define his position in respect to the Capper-Kelly bill.

Pharmacy Week Cup

Federal Wholesale Druggists Association has donated a silver cup to be awarded by the National Executive Committee on Pharmacy Week for the best professional window display exhibited in any retail pharmacy in the United States during Pharmacy Week, October 11 to 17.

CRYSALBA

THE NEW DENTIFRICE BASE

Adopt it Now *to prepare for* the Rising Cost of Glycerine

As prices go back to normal, glycerine will be increasingly expensive. Crysalba supplies gentle cleansing action and absorbs less Elixir—bringing real glycerine economy.

Let us work with you—without obligation—to fit Crysalba to your formula or your plans. Generous samples sent gladly.

Study these points of superiority:

1. Will not harden in tube
2. Equally satisfactory in both acid and alkaline tooth pastes
3. Tasteless, odorless—insoluble in ingredients commonly used in tooth paste manufacture
4. Low absorption of elixir
5. Uniformly white; uniform in purity; crystalline structure and absorption
6. Softer than the enamel of the teeth, yet highly effective as a polishing agent
7. About 99% will pass thru a 400-mesh screen
8. Inert, neutral and physiologically harmless
9. Contains no free lime
10. Free from arsenic, lead or other poisonous metals or their salts

THE ILIFF-BRUFF CHEMICAL COMPANY

Hoopeston, Illinois **DENTIFRICE DIVISION**

SWANN TCP Of uniform polishing power, which can be varied to your needs. Constant, uniform purity. Gives a creamy white paste of high effectiveness in acid or alkaline formulae.

PYRAN Patented. Designed to remove mucin placque without injury to enamel, dentin or gingival margins. Helps create proper mouth conditions. Equally useful in acid or alkaline pastes.

THE SWANN CORPORATION

BIRMINGHAM

NEW YORK ST. LOUIS

CINCINNATI

WORLD'S LARGEST DENTIFRICE BASE PRODUCERS

A. Ph. A. Meeting

American Pharmaceutical Association will hold its seventy-ninth annual meeting at Miami, July 27 to August 1. Heard with interest will be Chairman Cook, U. S. P. Revision Committee; and Chairman Gathercoal, N. F. Committee; who are expected to report on progress and decisions to date on these new revisions. Dr. J. J. Durrett of the Food and Drug Administration is also expected to speak on those subjects.

Board of Trade

American Can Co., Armstrong Cork Co., Canada Dry Ginger Ale, Inc., Industrial Chemical Co., John Powell & Co., Ungerer & Co., and White Rock Mineral Spring Co., have recently been elected members of the Drug & Chemical.

Beauty & Barbers

National Beauty & Barbers Supply Dealer's Association will hold its annual convention at the New Jefferson Hotel, St. Louis, October 12-17.

United Medicine

United Medicine Manufacturers of America will hold its tenth annual convention at the Hotel Statler, Detroit, September 14-16.

Amer. Chem. Society

American Chemical Society will hold its eighty-second annual meeting at the Hotel Statler, Buffalo, during the week of August 31.

Advertising

June Ads Up

Drugs and toiletries magazine advertising expenditures of $3,270,757 in June, 1931 showed a gain of 2.1 per cent. over the June, 1930 total of $3,204,785, according to Dorrance, Sullivan & Co., Inc., New York.

Of this June expenditure, $3,220,553 was spent in national magazines, compared with $3,155,968 in June of 1930, an increase of 2.1 per cent. In national farm magazines, the industry spent $50,204 in June of this year compared with $48,817 for the same month last year, an increase of 2.8 per cent.

Of the total magazine advertising expenditure for June 1931, manufacturers of drugs and toiletries spent $2,444,216 in advertising beauty preparations and toilet goods and $826,541 in advertising medical and proprietary goods.

The expenditure of the industry during May, 1931 for radio broadcast advertising over national networks totaled $463,074, a gain of 85 per cent. over the total of $250,823 spent in May 1930. During the first five months of 1931, the industry spent a total of $2,277,271 for radio advertising, compared with $1,212,288 during the same five months of 1930, an increase of 88 per cent, large enough to offset the decline in magazine advertising for the same period of this year as compared with last year, the total for all three classes of advertising during these five months of 1931 being $17,271,704, a gain of 3.2 per cent.

The total for the first six months of 1931 of magazine advertising was $18,819,028, a decline of 2.3 per cent. compared with the similar total of $19,263,201 for 1930. For this six months' period, the advertising expenditure in national magazines totaled $18,490,994 in 1931 compared with $18,939,058 for 1930, a decline of 2.4 per cent, and the similar expenditures in farm magazines were $328,034 for 1931 compared with $324,143 for 1930, a gain of 1.2 per cent.

Pompeian Panel

The Pompeian Co., Elmira, N. Y., has started to feature its new art panel in current advertising. More than half a million requests were received from consumers for last year's panel.

Broadcasts

FLYOSAN

William Peterman, Inc., Bristol-Myers subsidiary, has started a series of broadcasts over WJZ, New York, and WBAL, Baltimore, promoting "Flyosan," an insect-killing spray.

EDNA WALLACE HOPPER

Edna Wallace Hopper, Inc., Chicago, toilet preparations, is now boradcasting a Youth's Matinee program every Wednesday and Friday over CBS network.

NOXEMA

Noxema Chemical Co., Baltimore, is broadcasting a Summer Daze program every Monday over CBS network.

Physician's Samples

Battle Creek Food Co., Battle Creek, Mich., as part of its promotion work to physicians is presenting them with ten samples in the form of a bound volume entitled, "Healthful Living."

House Organs

SHOEMAKER

Frostilla Co., Elmira, N. Y., has started the publication of a four-page house organ called, "Behind the Scenes at Elmira, N. Y." The first issue features a new product, "Pompeian Dusting Powder," an after the bath, deodorizing body powder.

KNOX CO.

Knox Co., Kansas City, proprietary medicines, has started the publication of a house organ, "Fifty-Fifty."

Degen Joins Wasey

Robert F. Degen, recently manager, toilet goods division, Frederick Stearns & Co., Detroit, has joined service department of Erwin, Wasey & Co., New York advertising agency.

Account Changes

Edros Natural Products, Inc., New York, "Edrolax", to Zinn & Meyer, Inc., that city.

Dr. L. D. LeGear Medicine Co., St. Louis, animal medicines, to Porter-Eastman Co., Chicago.

T. Noonan & Sons., Boston, cosmetics, to P. F. O'Keefe Advertising Agency, Inc., that city.

Vee-dex Corp., Los Angeles, pharmaceuticals, to Milton Weinberg Advertising Co., that city.

Dermasan Co., Chicago, sunburn creams to M. Glen Miller that city.

Syer Corp., New York, "Momenta" tablets, to Churchill-Hall, Inc., that city.

Hayfever Remedy Co., Stillwater, Minn. to Guenther-Bradford & Co., Chicago.

Remington Laboratories, Inc., New York, pharmaceuticals to Small, Kleppner & Seiffer, Inc., that city.

Phenyo-Caffein Co., Worcester, Mass., medicines, to the same.

Dander-Go Co., Corsicana, Tex., dandruff preparation, to Bernard M. Brooks, San Antonio.

Proctor & Gamble Co., New York, "Camay" toilet soap, to Pedlar & Ryan, Inc., that city, and "Oxydol" household soap to Erwin, Wasey & Co., that city.

National Oil Products Co., Inc., Harrison, N. J., "Euthol" olive oil product for scalp, to McMullen, Sterling & Chalfant, Inc., New York.

Terri Cosmetics Corp., New York, to Conklin Mann, Inc., that city.

Foreign Trade

Exports Down

Sales of American toilet preparations abroad during the first four months of 1930 were valued at $3,254,572, as compared with $2,929,234 during the corresponding period of 1931. Depilatories and deodorants exported during the four months ended April 30, 1930, were valued at $26,000. Sales of the above during the similar period of 1931 were worth $150,000. Medicated soap exported during the period under review in 1930 was valued at $100,000, as compared with $123,000 in 1931. Rouges exported were worth $69.000 in 1930, as against $70,000 during 1931.

American Plants

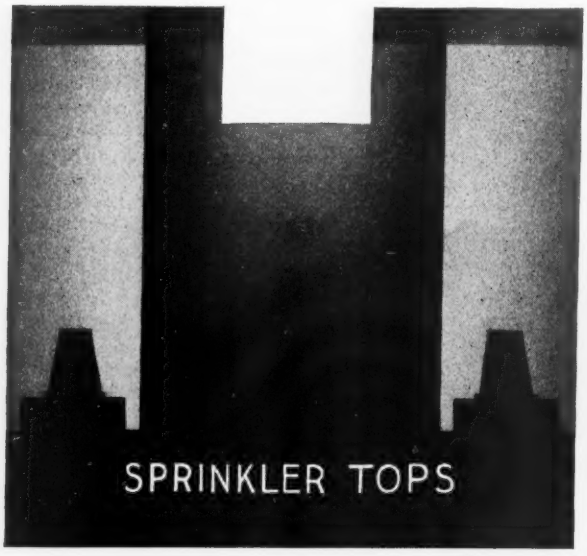
American manufacturers of pharmaceuticals and proprietary medicines owned and operated 102 establishments in foreign countries at the close of 1929. These con-

ART TUBE COMPANY

IRVINGTON, N. J.

. . . whistlin' . . .

not in the dark . . . but right out . . . in the open . . . 'cause we've found . . . 1931 . . . isn't so tough . . . as we all thought . . . it was going to be . . . and now . . . it's 23% . . . over even our record-breaking 1930 . . . for the first half . . . of this year . . . cheerio . . .



AN ADHESIVE FOR EVERY MACHINE OR HAND OPERATION

This Should Be CONVINCING To You!

The Standard-Knapp Corp., the leading manufacturers of Sealing and Can Labeling equipment, have now standardized exclusively on

MIKAH ADHESIVES

for testing, demonstrating and operating their equipment.

Obviously, they must use the best, as their only interest lies in the most efficient and economical functioning of their machines.

For information regarding either the adhesives formerly made by Standard-Knapp, or any other Mikah products, address

NATIONAL ADHESIVES CORPORATION

Home Office—820 Greenwich St., New York

1940 Carroll Ave., Chicago — 883 Bryant St., San Francisco
15 Elkins St., Boston — 1305 Germantown Ave., Philadelphia

WORLD'S LARGEST PRODUCER OF ADHESIVES

Sales Offices in all principal cities

cerns constituted an aggregate investment of $35,326,000. The number of plants and their investment value in various geographical divisions were as follows:—Canada, thirty-two, $7,478,000; Latin-America, thirty-one, $4,585,000; Europe, twenty-eight, $19,522,000; Australia and New Zealand, seven, $3,196,000; Asia and Africa four, $545,000.

Cod Liver Oil

National Committee for Promoting the Consumption of Cod Liver Oil, Bergen, Norway, has prepared some very striking and effective facts of interest to all those engaged in merchandising any form of Norwegian cod liver oil. Copies may be obtained by writing to the Norwegian Consulate, New York.

Retail Outlets

Chain Store Taxes

Developments of the past month in state chain store tax measures have been as follows: Kentucky State Court of Appeals upheld the validity of the Kentucky antichain store tax known as the gross retail store tax by a unanimous opinion; Illinois Senate amended the bill (H. 1909) to license only chain stores retailing groceries, meats, drugs, or tobacco, to make the bill effective July 1, 1932, to fix the annual license fee at $25 each for first three stores and $200 each for each additional store, to place money in State school fund, and to exempt cooperative marketing of distributive associations organized not for profit; Wisconsin chain store tax bill (A. 74) finally amended to impose a graduated rate of $3 to $25 and approved by both Houses died June 27 when the Legislature adjourned sine die. The bill had passed both Houses and gone to the Governor for his signature but an error in printing was discovered, the bill returned to the Senate for correction, and automatically killed when the Legislature voted to adjourn.

Chains Appeal

A petition seeking a rehearing of the so-called chain store tax case by the Supreme Court of the United States was filed on July 10 with the clerk of the court.

The court, by a five-to-four decision, held valid on May 18 an Indiana statute classifying and taxing the owner of two or more stores differently from the owner of one store, without regard to any other factor than the mere number of store locations.

By its decision, it is urged that the court places no limitation upon the power of a State to increase the amount of taxation upon the owner of two or more stores "to an oppressive extent, and to the point of destruction."

After its decision, the court is told, 53 bills to tax the ownership of two or more stores "at high and oppressive rates were introduced in 25 States. The maximum rate was proposed in a bill presented in the Massachusetts Legislature, which, levied a tax of $2,700 per store. Six bills each levying a tax of $1,000 per store, were introduced into the Legislatures of Arkansas, Illinois, Pennsylvania, West Virginia and Wisconsin. All these bills are based upon nothing save the numerical feature."

Household Remedy

Aspirin is a "household remedy" and as such exempted from the Ohio law requiring that drugs be sold only by registered pharmacists, according to a decision by Judge Edward F. Berry in the Columbus Municipal Court. Case was brought by state which charged Dan T. Khoury, grocer, with violating the law by selling aspirin. Defendant admitted sale and fact that he was not a registered pharmacist.

Law states that any other person who shall "compound, dispense or sell a drug, chemical or pharmaceutical preparation" shall be subject to a penalty. The law exempts sales in original packages of certain specified articles and "other similar preparations." The Court quoted from an opinion of the Attorney General holding that the Legislature did not intend to include those preparations commonly known as household remedies, and held that aspirin should properly be included within the latter classification.

Mayflower-McK. & R.

Mayflower Drug Stores, Inc., Pittsburgh, chain system operating 21 stores in that city, has organized a wholly-owned distributing subsidiary, Keystone Service Drug, Inc. The new company was organized primarily to distribute in Western Pennsylvania under an exclusive franchise the products of McKesson & Robbins, Inc. The new wholesale company, however, is not dealing with these products exclusively but is buying and distributing a complete line of drug products. In addition to the Mayflower stores, over 50 independent retail drug stores are reported to have contracted for the McKesson line through Keystone. The company is under the direct supervision of J. G. Sims, vice-president.

Small Stores Going

Clyde Eddy, merchandising manager, E. R. Squibb & Sons, addressed the sixty-first annual convention of the N. J. Pharmaceutical Assn., at Atlantic City N. J., June 18. He said that the tendency, as revealed by the U. S. Bureau of Census is toward fewer retail drug stores and that the business will largely be concentrated in stores that transact not less than $25,000 worth of business a year.

Receivership

Albert A. Light, treasurer, Stanley Drug Co., and John H. Belsterling, president, Aschenbach & Miller, wholesale druggists, have been appointed receivers of the Stanley Company, Philadelphia, chain stores.

Financial

Stocks Up

Prices of common stocks of drugs and cosmetics companies advanced six points from the year's low during June, according to the index of the Standard Statistics Co. of New York. A more substantial increase is observed in the prices of common stocks of 337 miscellaneous industries, which were also at the year's low in the week ended June 2. Detailed figures for both divisions follow:

1926 Average equals 100

	Drugs and Cosmetics	*337 Industrials*
June 3	114.0	82.0
10	116.9	85.4
17	116.9	84.1
24	119.7	94.5
July 1	120.0	94.5
1931 High	133.8	114.7
Low	114.0	82.0
1930 High	174.7	174.1
Low	115.8	98.2

McK. & R. Buys Bonds

McKesson & Robbins, Inc., as a result of purchases made in the open market, has acquired sufficient of its outstanding 5½% debentures to cover not only the sinking fund requirements due July 15, 1931, but also the sinking fund requirements of Jan. 15, 1932, calling together for the expenditure of $500,000. Acquisition of these bonds results in considerable saving to the company.

A total of $22,000,000 of the 5½% bonds were originally offered to investors last year.

Earnings

SCHERING-KAHLBAUM

Schering-Kahlbaum A. G., Berlin report net earnings of 6,007,414.84 reichsmarks for year ended December 31, 1930. Regular dividends of 5 per cent on common stock issues were declared and an extra dividend of 7 per cent. After deducting a further sum paid to the directors the balance of 2,546,001.84 was carried forward to the new account.

Of each dollar spent by consumers in chain grocery stores in 1929, 80.6 cents, on the average, were paid by the chains for the merchandise that they sold and 18.2 cents in addition to meet the chains' operating expenses, it was stated in a bulletin issued June 25, by the Bureau of business Research of the Harvard Business School. Thus 1.2 cents out of each consumer's dollar were retained by the chains as profit, the bulletin said.

Of the 18.2 cents required for operating expenses 12 cents were spent for expenses in the reatil stores, 0.85 cents for operating the warehouses, 0.9 cents for transportation from warehouses to stores, 3.7 cents for story of relative advantages or disand 0.75 cents for interest.

Not Merely a Trade Name — A Significant Background

POWCO
LABORATORY CONTROLLED
BRAND
REG. U.S. PAT. OFF

Neutral Powdered Soaps

Supervised production from the selection of raw materials to the final tests on the pulverized product—assuring faithful uniformity of chemical and physical characteristics.

JOHN POWELL & CO., INC.
114 E. 32nd St. New York, N. Y.

CAMPHOR SYNTHETIC

Chemically identical with natural camphor

MENTHOL SYNTHETIC

Fine natural odor--white crystals. For lower costs in mentholating mouth washes, tooth pastes, shaving creams, etc.

Thymol U. S. P.
Pure White Crystals

Terpin Hydrate
U. S. P. Powdered and Crystals

Terpineol C. P.

Urea C. P.

Urethane U. S. P.

Products of
Schering-Kahlbaum A. G.
Berlin

SCHERING CORPORATION 110 William Street New York, N.Y.

Sole Import and Sales Agents in the U. S. A. for the Manufacturers.

Stock Carried at New York

The bureau's bulletin was based on a study of profit and loss statements and balance sheets, received at first hand from 100 grocery chains, having more than 33,000 stores and aggregate sales in 1929 of more than $1,900,000,000.

BOOTS PURE DRUG

Boots Pure Drug Co., Ltd., London, reported net profit of £722.264, for year ended March 31, after provision for staff pension fund, depreciation, income taxes and other charges but before reserves. The net was equal to 41.70 per cent. on the common stock after dividends on the preference and preferred shares and compared with £724,868, or 48.32 per cent. on the common stock, in the preceding fiscal year. Company also declared regular extra dividend of 23 cents.

NORTHAM WARREN

Northam Warren Corp. and subsidiaries, New York, report net income, after Federal income tax, of $807,015 for calendar year 1930. This compares with $727,901 in 1929. Surplus as of December 31 was $1,639,414 as compared with $997,071 at the same time in 1929. Earnings per share on 192,500 shares of common amounted to $3.47 for 1930 as compared with $997,071 in 1929.

DOW CHEMICAL

Dow Chemical Co., has reported for year ended May 31: Net profit after charges and taxes, $2,377,200, equal after preferred dividends to $3.44 a share on common stock, compared with $2,782,017, or $4.08 a share, in preceding fiscal year.

AMERICAN POTASH

American Potash & Chemical Corp., has reported net income for 1930 totalling $1,771,108 as compared with $1,348,428 in 1929. Net sales in 1930 amounted to $4,149,280 and operating profits $1,860,544

Dividends

NOXZEMA

Noxzema Chemical Co., Baltimore, has declared the regular dividend of $1 per share on the 40,000 shares of stock outstanding, payable July 1 to holders of record June 27. It was reported at the meeting that for the six periods of four weeks ended with June 18 there was an increase of 40 per cent. in sales and a gain of 50 per cent. in profits. Earnings for the period were $2.50 per share against $1.65 for the corresponding time last year.

WEINBERGER

Weinberger Drug Stores, Inc., has declared a quarterly dividend of 25c a share and 1% in stock on the common stock, no par value, payable July 1 to holders of record June 20. Like amounts were paid on this issue on each of the five preceding quarters.

SWANN CORP.

Swann Corp., Birmingham, Ala., has declared its regular quarterly dividend of 15c a share on Class A and B stocks, payable July 1 to stock of record, June 24.

HEYDEN RESUMES

Heyden Chemical Co. has resumed the payment of dividends on the common stock with the declaration June 25 of 50 cents per share, payable August 1 to stock of record July 15. The last common dividend was paid December 5, 1930.

HOOK REDUCES

Hook Drugs, Inc., has reduced common stock dividend with the declaration of a distribution of 12½ cents per share, payable July 1, to holders of record June 20. Previously 25 cents per share was paid.

DOW DRUG OMITS

Dow Drug Co., has omitted the quarterly dividend ordinarily payable about July 1 on the common stock of no par value. Quarterly distributions of 25 cents per share each were paid on this issue from Jan. 1, 1928 to and including April 1, 1931. The directors, however, declared the usual quarterly dividend of 1¾% on the preferred stock, payable July 1 to holders of record June 20.

U. S. ALCOHOL OMITS

U. S. Industrial Alcohol Co. has omitted the usual quarterly dividend of 50 cents per share due on the common stock. The annual dividend rate was reduced to $2 per share in the first quarter of this year. Prior to that it had been $6 yearly from the initial quarter of 1929. It had been $5 per share in 1927 and 1928, following ommission in 1922 to 1926, inclusive. An extra of $1 a share was paid in 1930.

Food Products

Pennsylvania Sugar Co., Philadelphia, has purchased all assets of F neart Foods, Inc., Tuckahoe, N. Y., manufacturers of tea and coffee concentrates, fruit juices, and soluble chocolate. This is a new departure for Pennsylvania Sugar which hitherto has confined its activities to sugar refining, alcohol production (A. K. Hamilton), and solvents (Franco-American Chemical Works).

New Companies

Vitamin Products Corp., Wilmington, food elements—Corporation Trust Co., 100,000 shs com.

Sentinel Chemical Corp., New York—Kornfeld & Bisgeir, $20,000.

Beecham's Pills, Ltd., Niagara Falls, N. Y.—J. P. Milner, Niagara Falls, 2,000,000 shares of preferred valued at £ each and 5,000,000 ls. shs.

Dr. Rosen's Ex-El Toilet Preparations, Inc., Wilmington, drugs, medicines,—Corporation Fiscal Co., $100,000.

John Wyeth & Brother, Inc., Wilmington, chemical, pharmaceutical products—Corporation Trust Co., 1,000 shs com.

Egyptian Drug Store Co., Wilmington—Herman Cohen, Wilmington, Del., agent $5,000.

Atlas Bottle Supply Co., New York, drugs—Sas. A. Schlesinger, $20,000.

Main Trading Co., New York, chemicals—N. Sinkman, 10 shs com.

Midwest Kaolin Co., Olive Branch, Ill., mining—Colonial Charter Co., $100,000; 2,000 shs com.

General Vanilla Corp., Rochester, flavoring extracts, Goldstein & Goldman, $70,000 preferred, 300 shares common.

Tenol Chemical Corp., New York—G. M. Fayles, 100 shs com.

Cleanall Corp. of America, New York, cleaning chemicals—H. G. Kosch, 200 shs com.

Chemicraft Corp., New York, chemicals—Kossove & Leibowitz, $20,000.

Malkins Pharmacy, Inc., Montclair, N. J.—Joseph Bohrer, Newark, N. J., 1,000 shs com.

Puget Chemical Co., Jersey City, Filed by the company, $50,000 preferred, 4,000 shs com.

Empire Cosmetic Shops, New York—S. L. Miller, $10,000.

Widow's Mite Corp., Wilmington, Del., medicines, drugs, chemicals—Corporation Trust Co., 11,000 shs com.

Adams Chemists, New York, drug store, —B. Antin, 100 shs com.

Aldrich Pharmacal Laboratories, New York—B. J. R. Carples, $10,000.

Floraderm Laboratories, New York, cosmetics—E. X. Pagano, Jackson Heights $20,000.

Hildred of Hollywood, Ltd., Dover, Del., cosmetics, beauty preparations—United States Corporation Co., $50,000.

Camus Pharmacy, Inc., Philadelphia, Pa., drugs, sundries at wholesale—American Guaranty & Trust Co., $10,000.

Agathone Products, New York, chemicals—T. F. Mullaney, $10,000.

Acken Co., New York, toilet articles—W. J. A. Clancy, $300,000.

Alice Corry, Inc., Chicago, Ill., cosmetics business—Busby & Oury, Chicago, $1,000 n. p. v.

Grenoville, New York, drug stores—Root, Clark, Buckner & Ballantine, 1,000 shs com.

Vincent Chemists, New York, chemicals, —B. Antin, 100 shs com.

Boisse, New York, chemical research—J. M. Ingram, $1,000.

American Pharmaceutical Corp., Wilmington, chemical products—Corporation Service Co., $200,000; 20,000 shs com.

Ironside Pharmacal Co., New York, cosmetics—S. Gelb, $10,000.

United Pathological Laboratories, Brooklyn—Bynre & Byrne, $50,000.

Vapon, Inc., Montclair, manufacture drugs, chemicals—United States Corporation Co., New York City, 2,000 shs com.

Eau-de-Cologne, New York, perfumes—H. Feld, $100,000.

Lady Isabella, Rochester, cosmetics—Wener, Harris, Buck & Tew, Rochester, $37,500.

CORK-TEX
now goes fishing

He's been found to be the best grip for fishing rod handles ever developed. He gives that soft pliancy---that resilient smoothness---that swell "feel" so satisfactory in landing big ones.

Perhaps there is some use you could make of him that's unknown now. He's worth experimenting with. Write for full information.

CORK-TEX CLOSURE DENSE BACKING

LINERS FOR ALL TYPES OF CAPS

BOND MANUFACTURING CORPORATION
WILMINGTON · · · DELAWARE

Drugs, Oils, Chemicals Raw Materials

IMPORTERS
EXPORTERS &
DEALERS

Alkaloids
Camphor
Cod Liver Oil
Fine Chemicals
Medicinals
Menthol
Quinine Sulfate and Bisulfate
Santonine

Acid -- Citric, U. S. P.
Bay Rum, Genuine, Imported
Brucine Alkaloid -- Sulphate
Chalk, Precip. U. S. P. heavy -- light
Cocoa Butter U. S. P. in fingers
Gum Olibanum Siftings
Haarlem Oil "Klaas Tilly"
Leaves -- Henbane, Senna
Licorice Extract Sticks
Magnesia Carbonate B'ocks
Manna, large -- small flakes
Mannite in cones
Roots -- Golden Seal, Senega
Seed -- Parsley, Psyllium
Sulphur, Precip., U. S. P.
Thymol U. S. P. Cryst.
Witch Hazel, N. F. Double Dis.

CHAS. L. HUISKING & CO., Inc.
155 Varick Street New York City

Mysore Government
Sandalwood Oil

Distilled from
Santalum Album

{ INSIST ON ORIGINAL CANS AND CASES }

Agents for the United States and Canada

"ye Oldeſte Eſſence Diſtillers"

W. J. BUSH & CO.
(Incorporated)
Essential Oils
New York

Chicago National City, Calif. Montreal

Patents

UNITED STATES PATENTS

Propenyl Derivatives of Aromatic Hydrocarbons

These products are of therapeutic value. The process is concerned with their manufacture from their corresponding allyl derivatives. The allyl derivative of the aromatic hydrocarbon is first heated with an alkali in presence of an organic phenolic compound, which causes a solution of the allyl compound and its corresponding propenyl derivative during the isomerization process. The phenolic compound remains practically chemically unchanged during the isomerization process. Jacob Ehrlich, Belleville, N. J., assignor, Verona Chemical Co., Newark, N. J. U. S. P. No. 1,787,036, filed October 12, 1928.

Extracting Pyrethrum

This process is concerned with extraction of active principles from pyrethrum flowers with a petroleum distillate solvent. The solvent and the active principles are drawn off and a marc is formed, the residual solvent and active principles being expelled by high pressure and a twisting motion. William J. Trevillian, Freeport, Ill., assignor, The W. T. Rawleigh Co., Freeport, Ill. U. S. P. No. 1,786,967, filed April 14, 1929.

New Arsenical Medicaments

These new arsenical pharmaceuticals, known chemically as thiosemicarbazoles of hydroxy-arsenobenzenes, are highly complex compounds containing both nitrogen and sulphur in addition to arsenic. The new products are yellow to yellowish red in color and melt without decomposition. They readily dissolve in alkalies. They are used in various blood diseases. Karl Stretiwolf, Frankfort-on-Main, and Alfred Fehrle, Badsoden-on-the-Taunus, Germany, assignors, Winthrop Chemical Co., New York. U. S. P. No. 1,785,660, filed July 11, 1928.

Aliphatic Arseno Compound

This patent is concerned with the production of an arseno compound, in which at least one aliphatic radical substituted with a salt forming group is bonded to an arsenic atom. The latter is connected to another arsenic atom. The new compound possesses valuable therapeutic properties. Charles S. Palmer, Evanston, Ill., assignor, Parke, Davis & Co., Detroit, Mich. U. S. P. No. 1,794,119, filed December 12, 1925.

Closure for Receptacles

A closure for receptacles of the type, used for containing pharmaceutical and perfume products, consists of a member used to close over and seal the open mouth of the receptacle. A holder for the sealing device surrounds the same and is adapted by a turning movement to be engaged with the receptacle, and to force the sealing device against the mouth of the receptacle. A retaining device is provided for confining the sealing member in the holder while permitting of a circumferential movement of the holder relative thereto. The retaining device is made in the form of a spring engaged with the sealing member and detachably interlocked with the holder. Joseph L. Hecht, Davenport, Iowa. U. S. P. No. 1,793,930, filed May 7, 1929.

Medicated Tobacco

Tobacco is medicated with iodine according to a new process. The latter consists in first converting the iodine into a fluid state and then bringing the tobacco in contact with it while it remains in that state. The iodine is finally crystallized while in contact with the tobacco, so that it will become intimately mixed with it. Frank P. Strickler, Louisville, Ky. U. S. P. No. 1,793,723, filed April 12, 1929.

New Iodine Drugs

These new iodated pharmaceuticals are the iodides of 2-aminopyridine. Thus one of these iodide is called 5-iodo-2-isoamylaminopyridine. This compound comes in the form of colorless crystals melting at 59° to 61° C. On being heated in a vacuum it will distill over at 145° to 155° C. Max Dohrn and Ralph Dirksen, Berlin-Charlottenburg, Germany, assignors, Schering-Kahlbaum A. G., Berlin, Germany. U. S. P. No. 1,793,683, filed January 14, 1927.

Colloidal Metallic Phosphate

This patent is concerned with preparing colloidal metallic phosphate suitable for intravenous injections. The solution obtained is substantially non-toxic and incapable of affecting the haemoglobin of the blood. The solution not only contains the colloidal metallic phosphate but also a protective dispersing agent. Fritz E. Bischoff, Santa Barbara, Calif., assignor, Henry J. Ullmann, Santa Barbara, Calif. U. S. P. No. 1,794,510, filed August 23, 1927.

Remedy for Colds

A remedy for colds, hay fever, bronchitis and like diseases consists essentially of one part of atropine to approximately fifteen to twenty five parts by weight of dionine. Julius Hollo, Budapest, Hungary, assignor, Eugene J. Lorand, Kenvil, N. J. U. S. P. No. 1,794,292, filed February 15, 1929.

Production of Thymol

Process of making alkyl isopropyl phenols consists in acting on an alkyl isopropylene phenol at about 160° C. in presence of catalyst with hydrogen, until two hydrogen atoms have entered into combination. Walter Schoeller, Berlin-Westend and Hans Jordan, Berlin-Steglitz, Germany, assignor, Chemische Fabrik auf Actien, vormals E. Schering, Berlin, Germany. U. S. P. No. 1,786,922, filed June 20, 1927.

Menthol

Process of producing menthol and its isomers and homologues comprises treating an ether-like product of condensation of a cresol belonging to the group constituted by meta-and pata-cresol with a ketone of complex formula at 150° to 230° C. in presence of a catalyst with hydrogen until sixteen hydrogen atoms have entered into combination. Hans Jordan, Berlin-Steglitz, Germany, assignor, Schering-Kahlbaum A. G., Berlin, Germany. U. S. P. No. 1,797,612, filed August 15, 1927.

Analgeso Hypnotic Composition

This is a practically white and inodorous molecular compound of amidopyrin and ethyl-isopropylbarbituric acid. Werner M. Lauter, Brooklyn, N. Y., assignor, E. R. Squibb & Sons, New York. U.S.P. No. 1,797,428, filed May 19, 1928.

Aminoaryl-Arsonic Acids

Method of producing aminophenylarsonic acids consists of reducing a nitrophenylarsenic acid compound with zinc in aqueous solution of caustic alkali at a 40° to 70° C., and removing excess zinc, neutralizing, and separating the aminophenylarsonic acid which precipitates. Carol Oechslin, Albon, France, assignor, Les Etablissements Poulenc Freres. U.S.P. No. 1,798,030, filed November 2, 1927.

BRITISH PATENTS

Concentrating Vitamin

In dilute acid extract of vitamin-containing material, is dissolved a substance which, on neutralization, forms a compound, which is precipitated, carrying the vitamin with it. Calcium carbonate is mentioned as the substance. Thus calcium carbonate is dissolved in a dilute acetic acid extract of yeast and a sugar added. On neutralization with alkali, the sugar-calcium compound is precipitated. This is separated and stirred with sufficient

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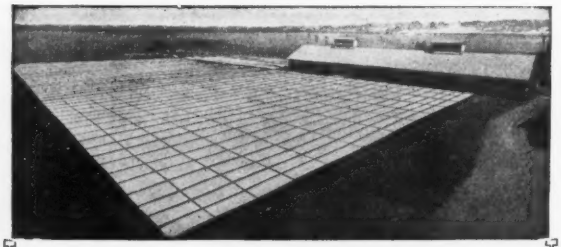

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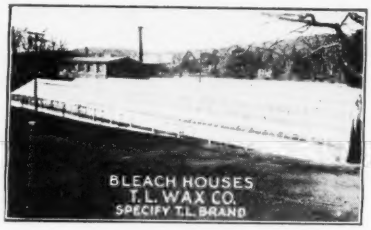

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dilute sulphuric acid to transform all the calcium into calcium sulphate. Alcohol is added and alcoholic extract is separated and concentrated to give an emulsion containing the vitamin. A. B. O. Norrbin and Aktiebolaget Astra Kemiska Fabr. B. P. No. 343,086, filed November 13, 1929.

Skin Protective Creams

An example of the type of cream composition covered by this patent, is as follows. The emulsified mixture contains 19 parts of soap, 4 parts of gum arabic, 2 parts of purified wool fat, 1 part of glycerin and 74 parts of water. W. Frederickson, assignor, British Thomson-Houston Co. Ltd. B. P. No. 342,947, filed March 26, 1930.

Stable Acridine Salt Solutions

These are new therapeutic agents. The solutions of 3:7-diamonoacridine salts or of 3:7-diamino-5-methylacridinum salts are stabilized for injection purposes by addition of a reducing agent such as sodium hydrogen sulphite, sodium hyposulphite, and acetone bisulphite. Reducing agents may be added before or after solution is made. I. G. Farbenindustrie A. G., Frankfort-am-Main, Germany. B. P. No. 342,690.

Antimony Medicinal Compounds

Process for manufacture of therapeutic compounds containing antimony and being stable in solution form. Polyhydric alcohols, containing four or more hydroxy groups, are added to stabilize aqueous solutions of organic salts of antimony or amine salts of antimonic acid. I. G. Farbenindustrie A. G., Frankfurt-am-Main, Germany. B. P. No. 342,375, filed November 5, 1929.

Purification of Sexual Hormone Extracts

Crude extracts are treated with methanol and solution extracted several times with light petroleum. Hormone remains in aqueous methanol, which is evaporated. Schering-Kahlbaum A. G., B. P. No. 343,779, filed March 14, 1930.

Basic Bismuth Salts of Organic Mercury Compounds

A simple or complex bismuth salt is caused to react with a soluble organic mercury compound containing an acid group, in which the mercury is non-ionized. The products are useful against syphilis. Examples are sodium orthocarboxymethylnercuri-salicyl-allylamide with bismuth nitrate in glycerin and water, giving on neutralization with sodium hydroxide a basic bismuth salt; basic bismuth salts of mercurated 3-acetamido-4-allyloxybenzene-arsinic acid, of mercurated benzthio-iminazole-4-arsinic acid, or mercurated benzthio-iminazol-4-carboxylic acid, or mercurated benzthio-iminazol-4-sulphonic acid, and of mercurated meta-allylthiocarbamido-benzoic acid. W. W. Graves. B. P. No. 339,760, filed November 15, 1929.

Allium Pharmaceutical

Patent is concerned with preparation of pharmaceuticals from plants of genus allium. Ground plant of this genus, particularly garlic, are heated with water under pressure and a current of air or steam is passed through the hot pulp to remove the odor. "Algionat Gesellschaft G.m b.H., Germany. B. P. No. 35,600, filed July 23, 1930.

Hormone of Anterior Lobe of Hypohysis

Aqueous solution of precipitated crude hormone, obtained from urine, is treated with such salts of multivalent metals, the anions of which form alcohol soluble sodium salts. Salts of the alkaline earths are particularly used for this purpose. The precipitated phosphates and sulphates are removed and the hormone is precipitated from the liquid with organic solvents. Schering Kahlbaum A. G., Germany. B. P. No. 341,038, filed October 4, 1929.

GERMAN PATENTS

5-Chlorocarvacrole

This compound possessing high disinfecting properties may be obtained in good yield when 5-aminocarvaccol (1-methyl-2-oxy-isoproply-5-aminpbenzene) is diazotized and the diazo group is decomposed with chlorine. Aminocarvacrol is easily obtained by reduction of the nitrosocarvacrol, which is obtained from carvaccol by action of nitrous acid. This nitrosocarvacrol is obtained from the amino compound by the action of tin chloride and hydrochloric acid. Chemische Fabrik von Heyden A. G., Dresden, Germany. G. P. No. 522,062, filed February 10, 1929.

Conversion of Borneol into Camphor

Camphor can be obtained from borneol in satisfactory yield, when the latter is treated with hydrogen-splitting catalysts in presence of metallic oxides, which do not belong to alkali and alkaline earth groups. Metallic oxides well suited for this purpose include lanthanum oxide, ytrrium oxide, manganous oxide, cadmium oxide, stannous oxide. The reaction is particularly easy to carry out in the gaseous phase. Catalysts are obtained when the carbonates or the oxides of the metals, which split off hydrogen and which serve as catalysts, such as for example copper, nickel and the like, are mixed with the aforementioned metallic oxides or their compounds, particularly carbonates, chromates, urenates, etc. Then mixture is heated to 350° C. They are heated again and reduced. I. G. Farbenindustrie A. G., Frankfurt-am-Main, Germany. G. P. No. 520,224, filed June 25, 1927.

Thymol and Isomers and Homologues

Former processes have been characterized by the use of a catalyst which has effect of reducing temperature of reaction. It has now been found that surprisingly good results are obtained in the splitting and simultaneous hydrogenation of the condensation products, when the hydrogenation reaction is carried out at a higher temperature than usual for this type of process. Thus temperature is increased to 280° C. In one example the condensation product of meta-cresol and acetone is treated with hydrogen under pressure at 280° after a nickel catalyst has been added. The reaction is continued until four atoms of hydrogen have been absorbed and thymol is thus obtained. When the condensation product of paracresol and acetone is treated in the same manner 4-methyl-6-isopropyl-1-oxybenbene is obtained. Schering Kahlbaum A. G., Berlin, Germany. G. P. No. 521,726, filed November 17, 1926.

Fatty Acid Esters of Borneol and Isoborneol

These esters are produced by admixture of camphene and fatty acids and subjection of mixture to 0°C. and below. Further esterification is also carried out at these low temperatures. Schering-Kahlbaum A. G., Berlin, Germany. G. P. No. 510,429, filed March 20, 1928.

Alkaloids and their Purification

This process is suited to production and purification of alkaloids with exception of conessin. The raw materials containing alkaloids, are extracted with dilute acids, and the admixed substances, which are injurious to action of alkaloids, are removed from resulting acid solutions, by precipitation. Kyk-Guldenwerke Chemische Fabrik A. G., Berlin, Germany. G. P. No. 510,185, filed May 21, 1926.

Porphrines

These therapeutic substances are made by halogenated dipyrrylmthene being subjected to a molten mass at a high temperature. Fr. Hans Fischer, Muenchen, Germany. G. P. No. 511,319, filed March 14, 1928.

Bacterial Cultures

The patent is concerned with preparation of highly active bacterial cultures to be used for noxious tumors. These cultures are allowed to grow on nutrient media, containing genuine albumen of tumors. I. G. Farbenindustrie A. G., Frankfurt-am-Main, Germany. G. P. No. 510,591, filed February 15, 1929.

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Abstracts

Manufacture of Hydrogen Peroxide

Processes for electrolytic manufacture of hydrogen peroxide include a large number of patents recently issued. A detailed discussion is included of the electrolytic process which permits a 30% hydrogen peroxide. The use of solid persulphates in the place of solutions of persulphuric acid also receives attention. A particular feature of process is distillation method which operates with high heat economy. The hydrogen peroxide is driven out of persulphate sulphuric acid mixture by direct admission of steam, the amount of steam being regulated to amount of hydrogen peroxide formed. Another process is mentioned in which the distillation takes place within externally heated capillary tubes. The liquid that is being distilled under these conditions is in the foaming state. Dr. Gustav Teichner, Chemiker Zeitung, volume 55, year 1931, pages 402 to 403.

Activated Charcoal in Perfumes

Certain perfume preparations, when allowed to stand for a time in storage, develop disagreeable odors. Activated charcoal absorbs these odors. It is recommended that a preliminary test should first be carried out on the activated charcoal, which the manufacturer is planning to use, since activated charcoals vary and some may do more harm than good. The preliminary investigation should determine whether or not the activated charcoal in question is suitable for this purpose, how long the duration of the action of the charcoal on the perfume should be and finally what quantity of activated charcoal should be used. The test is best made with about 50cc. of the perfume, which is shaken with an excess of the charcoal, about 2 kilograms. The mass is filtered after ten minutes and then the action of the activated charcoal on the perfume is determined. If the odor of the perfume has improved, the next step is to determine the amount of charcoal to be used. This is done by filling 50cc. samples of the perfume into various flasks and adding half a kilogram, one, one and one-half, and two kilograms of charcoal. Mixtures are again shaken and allowed to remain for ten minutes and filtered and effectiveness established. When perfume is treated the charcoal is stirred well into perfume and after purification is complete, mass is filtered through asbestos. The charcoal will be able to absorb some of the necessary ingredients of the perfume and this requires that the filtered product should be re-perfumed. Dr. Erich Walter, Der Parfuemeur, 1931, page 275.

Medicinal Face Washes

The following rather involved face wash compositions are reported highly useful in removal of skin blemishes, pimples and the like. One contains 32.5 parts sodium carbonate, 840 parts rose water, 125 parts glycerin, 2.5 parts perfume. Another contains 10 parts boric acid, 20 parts sodium sulphite, 40 parts glycerin and 950 parts rose water. Still another contains 5 parts glacial acetic acid, 5 parts tincture of benzoin, 5 parts spirits of camphor, 7½ parts tincture santal. rubr. and 77.5 parts 90% alcohol. Apitheker Zeitung.

Improvements in Making Lipsticks

Alloxan, a derivative of urea is useful in the manufacture of kiss-proof lipsticks. The alloxan is dissolved in a little alcohol and added directly to the fatty base. The best suited base is claimed to be a mixture of 320 parts cocoa butter, 400 parts white ceresin wax, thirty parts white wax and 150 parts white paraffin oil. Another mixture consists of 380 parts cocoa butter, 400 parts white ceresin wax and 200 parts white paraffin oil. The mixture is melted and one part is mixed with the coloring matter and then this colored mass is stirred into the rest of the base, which is thereafter perfumed and molded into form. Attention must be called to the fact that alloxan cannot resist the action of moderately high temperatures, and these must therefore be avoided in order that the alloxan not decomposed. Deutsche Parfuemeur Zeitung.

New Bismuth Hair Dyes

A hair dye, that contains bismuth salts, can be prepared in the colorless state. A neutral bismuth nitrate is used for this purpose. This salt is best soluble in the ratio of one to five in glycerin. The solution, which is obtained in this manner, can be diluted with water, without the bismuth nitrate separating out in the insoluble basic form. It is also possible to dissolve the bismuth nitrate directly in water containing glycerin. This process must however be carried out with great care. It can be done in the following manner. One hundred grams of a neutral bismuth nitrate is added to a 1,000cc. measuring cylinder and 100cc. of glycerin of 28° Be. concentration are added. A solution of water and glycerin in the proportion of one part of glycerin to ten parts of water is prepared separately, and this solution added to the measuring cylinder in the propertion of 100cc. The crystals of bismuth nitrate are crushed within the measuring cylinder by means of a glass rod. After solution is complete, remainder of glycerin solution is added in small portions with constant agitation. Volume is made up to one liter with additional glycerin solution. This mixture is used directly for dyeing hair. A colorless hair dye may also be prepared by mixing together two solutions. The first consists of a solution of 50 grams of bismuth nitrate in 250 grams of distilled water, 700 grams of alcohol and ammonia. The second solution consists of 100 grams of sodium thiosulphate to a liter of distilled water. Apotheker Zeitung.

Perfuming Depilatories

Preparations used for removing hair from the body, contain mostly calcium sulphite, strontium sulphide or mixtures of these. There is always a sweetish odor of hydrogen sulphide present and it is quite a problem to mask these odors. The perfume must not only be powerful, but must also be resistant to the action of hydrogen sulphide. Esters are for example nearly all saponified and destroyed under these conditions. Other sensitive perfumes are subject to polymerization. The reducing action of sulphuretted hydrogen is particularly toublesome in the case of musk. Furthermore, sulphuretted hydrogen acts on many perfumes by substitution and addition. While the alcoholic hydroxyl group is comparatively stable, there appears to be an exchange between the phenolic hydroxy group and the sulphydrate group with the formation of thiophenols. This probably explains the action of the sulphuretted hydrogen on eugenol and isoeugenol. The action of sulphuretted hydrogen on aldehydes eventually results in formation of thioderivatives with a garlic like odor. Many of the ketonic perfumes are stable to the action of sulphuretted hydrogen, but the violet ketone is not and is completely destroyed. The most resistant aromatics that can be used for the perfuming of these preparations are the alcohol and phenol ethers, the hydrocarbons, some ketones, alcohols and perhaps a few acetals. Berichte der Schimmel & Co. 1931.

Decomposition of Cocaine Solution

An investigation was carried out to determine the effect of sterilization and storage of cocaine solutions on their chemical composition. The method used in determination of amount of cocaine in solution consisted in adding sodium carbonate to the solution and extracting with mixture of isopropyl alcohol and chloroform in proportion of one part by volume of isopropyl alcohol to three parts by volume of chloroform. After complete

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hydrolysis with sodium hydroxide has taken place benzoic acid is added. Mixture is then acidified and extracted with chloroform. This enables the amount of hydrolysis which has occurred in the solution of cocaine hydrochloride to be ascertained. There is considerable hydrolysis in buffered solutions of pH above three to four, but pure aqueous cocaine hydrochloride may be sterilized by steam for thirty minutes, in presence of 0.001 normal solution of hydrochloric acid by heating at 120°C. for 20 minutes without appreciable decomposition. S. A. Schou and E. Helm, Dansk Tids. Farm., volume 5, pages 1 to 11.

Determinations of Ketones

This article is concerned with a particular application of the hydroxyl method for the determination of ketones, such as carvone in caraway and dill oils. Two samples of the oil, each weighing 1.5 grams, are placed in each of two stoppered tubes and to each tube are added 10cc. of the hydroxylamine hydrochloride reagent. The tubes are heated at 75°C. and contents titrated with normal alcoholic potash solution, until a golden yellow color is obtained. An excess of ½cc. of potash is added to one tube and if color becomes a paler yellow the solution in the other tube is titrated further until the two colors match. This figure is then multiplied by 1.008 as a correction factor and the result calculated to carbon. The reagent is prepared by dissolving 6.95 grams of hydroxylamine hydrochloride is 95cc. of 90% alcohol, adding 0.4cc. of a 0.2% solution of dimethyl yellow and neutralizing to full yellow with normal solution of alcoholic potash. C. T. Bennett and T. T. Cockling, Analyst, 1931, volume 56, 79-82.

Vacuum Microsublimation of Drugs

Various methods used for sublimation of small quantities of material are described. The types of sublimate obtained with Eder's micro-sublimation apparatus and with Diepolder's vacuum apparatus are described, and details, including photomicrographs, are given of results obtained with a number of synthetic drugs. Four groups are recognized, according to the ease with which a crystalline sublimate is obtained. Although the melting point is of little significance for the sublimation process, the difference between the sublimation temperature and the melting point is a deciding factor as to whether or not well defined sublimates can be obtained. Tables are given showing for a number of drugs the melting point, initial and optimum sublimation temperatures and the nature of the sublimate, and these data, in conjunction with the crystal form of the sublimate, serve in most cases for identification. Separation of a mixture of such compounds by sublimation is rarely possible, as for the majority the sublimation temperature lies between 100° and 140° C. R. Eder and W. Haas, Mikrochem. Emich Festschr.

Lobelia Alkaloids

Lobelia inflata contains a number of alkaloids the most important of which is lobeline; there are also various secondary alkaloids. Lobelia preparations, principally the tincture, are used in ills of the respiratory tract, particularly in asthma. Activity of these preparations is due to their content of lobeline and the physiological activity of this substance has been subjected to much study. There is, however, very little information available on methods for evaluation of lobeline. The author made quite an investigation of the methods and has come to the conclusion that it is possible to evaluate lobeline by precipitating it in the cold with the aid of silicotungstic acid in a normal hydrochloric acid solution. When the weight of the residue remaining after calcination is multiplied by 0.414, the weight of lobeline is obtained. Bulletin des Sciences Pharmaceutiques.

New Codeine Reaction

The reaction, which is used in detecting morphine and which depends on the brownish or reddish coloration which this alkaloid ordinarily produces with an excess of ammonia in the presence of bromine water, is ordinarily negative in the case of codeine. However, if the bromine water is added with great care to a slightly acidulated solution of codeine up to the point that a pale yellow color appears, and if an excess of ammonia is added at this instant, then a characteristic rose color is developed which is distintcly different from the color obtained with morphine. Dionine, which is the ethyl homologue of codeine, gives the same reaction. The sensitivity of the reaction remains constant for all pH values lying between the pH value of ammonia and that of acetic acid. If soda solution is added in place of ammonia, the characteristic coloration is not obtained, but this will re-appear on addition of acetic acid. It has finally been proven that the reaction is more sensitive when chlorine water is employed in the place of bromine water and that numerous alkaloids do not give this reaction. G. de Haas. Pharm. Weekblad.

Organo Thallium Halides

These products have therapeutic properties and a new method for their preparation is described. Thus for example diphenyl thallium chloride and bromide are obtained by making thallium chloride and bromide to react in aqueous solution with phenylboric acid. The properties of the new compounds are studied. F. Challenger, Chemistry and Industry, 1931, page 180.

Chemotherapy of Antimony

Tartar emetic has been used in the treatment of tropical diseases. Various derivatives of para-aminophenylstibinic acid have also been used for this purpose. Urea-stibamine was particularly effective. New drugs of the antimony type are sodium para-aminophenylstibinic acid-N-glucoside and diethylamine para-aminophenylstibinate. These drugs are described in detail from the standpoint of their action and composition; particular attention is given to the compostiion of urea stibamine. W. H. Gray, J. W. Trevan and H. W. Bainbridge. Chemistry and Industry, 1931, pages 215-217.

Constituents of Fresh Kola Nuts

It is known that caffeine and theobromine are found in kola nuts. A special tannin, kolatine and kolateine have recently been isolated. The author's work was to try to isolate from the nuts the alkaloidal tanno-glucoside, which many authors have stated must be present. Nevertheless he was able merely to isolate a special tannin, to which he gave the name of kolacatechine. The author is concerned with a discussion of the claims of various investigators regarding the composition of the kola nut. M. Casparis. Pharm. Acta Helv., volume 4, page 181.

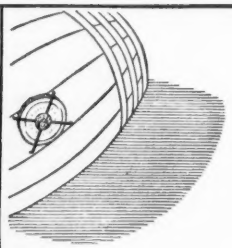
Treating Fresh Gentian Root

This article is concerned with the effect on the gulcide content of pupling fresh gentian root. It has been found that the hydrolysis of the osides is accelerated during the pulping of the gentian root by the soluble ferments. Thus 21.3% of the holosides hydrolyzable by invertin, 19.7% hydrolzyable by emulsin and 48.2% of the gentiopicroside are hydrolyzed. On keeping the pulp, hydrolysis proceeds regularly, except that due to the emulsin, which appears to be most rapid during the first hour. In two hours all the gentiopicroside is destroyed. No reaction for gentiogenol is obtained, and there remains only a small amount of product hydrolyzable by emulsin. C. Beguin, Journal Phar, Chim. volume 12, 213-9.

Evaluation of Cantharides

For the determination of cantharidin in cantharides the powdered material, weighing 7.5 grams, is extracted with 30cc. of acetone and 0.6 grams of hydrochloric acid for two hours, and the filtered and evaporated extract is washed four times with a mixture of 10cc. of light petroleum, saturated with hydrochloric acid and cantharidin, with 6cc. of ethyl alcohol. Further purification may be effected by recrystallization from acetone and repeated washing. J. O. Riu, Anal. Fis. Quim. 1931, 16x-9.

FABRITIUS, OSLO



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Prices Current

Medicinal, Aromatic, and Photographic Chemicals, Crude Drugs, Spices, Essential Oils and Concentrates, Miscellaneous Raw Materials, etc.

Chemical prices quoted are of American manufacturers, spot New York, f. o. b. for immediate shipment, unless otherwise specified.

Products sold f. o. b. works are so specified. Imported chemicals are so designated. Resale stocks, when a market factor, are indicated "second hand."

Crude Drugs and Essential Oils are quoted f. o. b. New York (Manhattan with limitations) for immediate shipment

The range of price given is not "bid and asked," but are prices of different sellers, based on varying grades and/or quantities. Containers named are original packages most commonly sold.

Acetanilid
Hyoscyamine Sulfate

Chemicals

Acetanilid, USP, 200 lb bbls..lb	.24	.25
Acetone, pure 350 lb drs wks..	.12	.14
Acetphenetidin, 225 lb bbls..lb.	1.25	1.30
ACID, Acetylsalicylic, 225 lb ....bbls.	.85	.90
Agaric, 1 oz vials.....oz	...	3.50
Arsenous, USP, 220 lb bbls lb.	...	.18
Benzoic, USP, 100 lb bbls.lb.	.60	.61
Boric, 300 lb bbls.....lb.	.09½	.10
Cacodylic, 5 lb. bot.....lb.	...	8.00
Camphoric, USP, VIII 1 lb bot.....lb.	4.82	4.82
Carbolic, USP, crys 112 lb tins.....lb.	.17	.18
Cinnamic, 5 lb cans.....lb.	3.25	3.50
Citric, USP, crys 230 lb bbl .....lb.	...	.36
USP, crys imp. 112 lb keg .....lb.	.41	.43
USP, powd 200 lb bbl...lb.	...	.36½
Diethylbarbituric, 1 lb bot lb.	4.00	4.50
Gallic, USP, 150 lb bbls..lb.	...	.74
Glycerophosphoric, 25% 1 lb bot.....lb.	1.40	1.75
Hydriodic, USP, 10% 5 lb bot.....lb.	...	.70
Hydrobromic, USP, 40% 155 lb. cbys.....lb.	...	.55
Hypophosphorous, USP, 30% .....lb.		
5 gal demis.....lb.	...	.85
Lactic, USP, VIII 100 lb cbys lb.....	.53	.59
USP, X 100 lb cbys.....lb.	.57	.59
Phenylcinchonic.....lb.	...	3.25
Phosphoric, USP, Syr 70 lb drs.....lb.	.14	.15
Pyrogallic, crys 5 lb cans..lb.	1.30	1.40
Resublimed, 5 lb cans...lb.	1.60	1.70
Salicylic, USP, 100 lb bbls. lb.	.40	.45
Stearic, double pressed, bags .....lb.	.12½	.13
Triple pressed, bags,....lb.	.14½	.15
Succinic, 100 lb bbls.....lb.	...	1.35
Sulfurous, USP, 6% 100 lb cbys.....lb.	.05	.06
Tannic, USP, fluffy 50 lb bbls. .....lb.	.90	.93
Powd 200 lb bbls.....lb.	.80	.85
Tartaric, USP, 300 lb bbls.lb	.31½	.32½
Aconitine, Alk, crys 1 oz vials .....oz.	...	30.00
Amorphous, 1 oz vials....oz.	...	20.00
Adeps Lanae, hyd 350 lb bbls lb.	.13	.15
Anhydrous, 350 lb bbls....lb.	.14	.16
Agaricin, 1 oz vis incl.....oz.	...	2.32
ALCOHOL, Benzyl, 5 lb bot lb.	1.20	1.35
Ethyl, USP, 190 pf 50 gal bbls.....gal.	...	2.56
Grain bbls.....gal.	...	2.61
Pure tax free drums...gal.		
Ethyl.....gal.	...	.42
Grain.....gal.	..	.47
Denatured, (drums included) add 5c for bbls.		
No. 1 spec.....gal.	.27	.35
No. 5 comp.....gal.	.27	.35
23 a, spec.....gal.	.30	.38
39 b, spec.....gal.	.39	.47
40 m, spec .....gal.	.33½	.42½
Isopropyl refd 98-99% drs. incl.....gal.	.55	.60
Phenylethyl, 1 lb bot.....lb.	4.30	4.50
Aloin, USP, 100 lb cases....lb.	1.51	1.55
Aluminum Acetotartrate kegs .....lb.	...	1.60
Amidipyrine, 10 lb boxes....lb.	4.25	4.45
AMMONIUM, Acetate 100 lb kegs.....lb.	.38	.40
Benzoate, USP, 1 lb bot...lb.	...	1.27
Borate, 10 lb bot.....lb.	...	.35
Bromide, USP, 450 lb bbls.lb.	.38	.39
Imported, 112 lb boxes..lb.	.39	.41
Carb, USP, lump 100 lb kegs .....lb.	...	.13½
USP, powd 100 lb kegs..lb.	...	.14½
Citrate, 100 lb kegs.....lb.	.90	1.30
Ichthyolate, as to brand..lb.	4.00	4.50
Iodide, USP, 25 lb jars...lb.	...	5.20
Phosphate, dibasic 250 lb bbls .....lb.	.48	.50
Salicylate, USP, 100 lb kegs .....lb.	1.15	1.20
Valerate, USP, 25 lb jars...lb.	2.75	2.90
Amylene Hydrate, 1 lb bot...lb.	...	7.10
Antipyrine, USP, 100 lb cans.lb.	2.25	2.60
Apomorphine Hydrochloride, ¼ oz. vials.....oz.	22.60	22.70
Arecoline Hydrobrom, 1 oz vials .....oz.	5.25	5.35
Aspidospermine Amorphous.oz.	...	15.00
Atropine Alk, USP, 1 oz. vials .....oz.	6.50	7.00
Methyl bromide, 1 oz vials.oz.	...	25.00
Sulfate, 5 oz cans.....oz.	...	2.50
Single ounce.....oz.	...	3.00
Barium Iodide, 5 lb box...lb.	...	5.15
Sulfate, X-ray diagn bbls..lb.	.09½	.10
BAY RUM Porto Rico, 45 gal. bbls.....gal.	.75	.80
Domestic syn. 50 gal bbl..gal.	.70	.75
St. Thomas, 50 gal bbls...gal.	.80	.90
Benzonaphthol, 5 lb boxes...lb.	2.50	2.60
Benzoyl Cholride, 500 lb dr..lb.	1.00	1.05
Benzyl Benzoate, Medicinal FFC.....lb.	1.20	1.40
Chloride Redis, 160 lb cby.lb.	.30	.35
Formate, 1 lb bot.....lb.	3.25	3.50
Succinate, 160 lb cby.....lb.	...	5.25
BISMUTH, metal 100 lb cases .....lb.	...	1.40
Ammon. Citrate, USP, 5 lb cans.....lb.	...	3.25
Betanaphtholate, 5 lb box..lb.	...	2.90
Citrate, USP, 5 lb cans....lb.	...	2.60
Chloride.....lb.	...	3.00
Hydroxide.....lb.	...	2.90
Nitrate, 25 lb jars.....lb	...	1.25
Oxide anhydrous.....lb.	...	3.25
Oxychloride, 25 lb boxes...lb.	...	2.95
Salicylate, 25 lb boxes.....lb.	...	1.65
Subcarbonate, USP, 25 lb boxes.....lb.	1.70	1.75
Subcarbonate, X-ray diag 1 lb. bot.....lb.	2.65	2.72
Subgallate, USP, 25 lb boxes .....lb.	1.75	1.80
Subiodide, 5 lb lots.....lb.	...	4.10
Subnitrate, USP, 25 lb jar.lb.	1.50	1.55
Subsalicylate, USP, 25 lb boxes.....lb.	2.55	2.60
Tannate.....lb.	...	2.30
Borax, crys USP, 400 lb bbls.lb.	...	.06
Bromoform, USP, 5 lb bot cases .....lb.	1.65	1.90
Butylchloral Hydrate bot....lb.	4.00	5.00
Cadmium iodide, 10 lb bot...lb.	...	4.55
CAFFEINE Alk, USP, 1 ..... 100 lb kegs.....lb.	2.45	2.50
Citrated, 50 lb cans.....lb	2.20	2.45
Hydrobromide, 1 lb bot...lb.	4.80	5.00
Hydrochloride, 1 lb bot...lb	6.05	6.55
Sulfate, 1 lb bot.....lb.	5.40	5.90
Sodium Benzoate, tins....lb.	...	3.05
Salicylate, tins.....lb.	...	2.95
Calcium Bromide, 100 lb cs..lb.	...	.60
Carb, USP, 175 lb bbls....lb.	.05	.06
Glycerophos, 250 lb bbls...lb.	...	1.40
Hypophos, USP, 25 lb cans lb.	.55	.60
Iodide, 5 lb bot.....lb.	...	4.85
Lactate, USP, 500 lb bbls lb.	.45	.50
Lactophosphate Soluble...lb.	...	1.20
Powdered tins.....lb	...	1.00
Insol, powd tins.....lb.	...	.50
Phosphate & Sulfate Tooth Paste grade, Works..lbs.	.03	.06
Sulfide, USP, 100 lb drs...lb.	.21½	.24
CAMPHOR, Jap. ref. slabs 100 lb. cases.....lb.	.54	.55
Refined powd.....lb.	.55	.56
½ oz tab, 100 lb cases....lb.	.67	.68
Liniment, bbls.....gal.	2.20	2.30
Monobrom, 100 lb cases...lb.	1.85	1.90
Casein edible, 100 lb kegs...lb.	.45	.55
Charcoal Animal medicinal jars incl.....lb.	...	.50
Charcoal Wood, powd, 100 lb. bbls.....lb.	.06	.07
Chloral Hydrate, USP, 25 lb jars.....lb.	.78	.80
100 lb drums.....lb.	.73	.75
Cholesterin.....oz.	5.50	5.85
Chloroform, USP, 50 lb drs...lb.	.25	.27
Chlorophyll, 1 lb. bot.....lb.	2.12	2.30
Chromium Sulfate Scales, tins .....lb.	.45	.50
Powdered tins.....lb.	.50	.55
Chrysarobin, 50 lb tins.....lb.	3.75	4.10
Cinchonine Alk, 100 oz tins.oz.	...	.38
Crystal.....oz.	.43	.46
Sulfate, 100 oz tins.....oz.	...	.25
Cinchonidin Sulfate, 100 oz tins .....oz.	.35	.35
Cincophen, U.S.P. bbls.....lb.	3.25	...
boxes, drms., kegs.....lb.	3.35	3.50
Cocaine Alk, USP, 1 oz vial..oz.	...	11.07
Hydrochloride, USP,.....oz.	...	8.50
CODEINE Alk, 1 oz vials, 10 lots.....oz.	...	10.52
Hydrobromide.....oz.	...	8.92
Hydrochloride.....oz.	...	9.52
Nitrate, oz vl 10 oz lots....oz.	...	9.80
Phosp. oz vl, 10 oz lots....oz.	...	7.92
Salicylate.....oz.	...	8.25
Sulfate, oz vl, 10 oz lots...oz.	...	8.42
Colchicino Alk, USP, 1 oz vl.oz.	...	20.00
Salicylate, 1 oz vls.....oz.	...	35.50
Cream Tartar, USP, 300 lb bbls .....lb.	.22½	.23½
Imp. powd. 224 lb bbls....lb.	.22½	.23
Creosote, USP, 42 lb cbys....lb.	.45	.47
Carbonate, 150 lb.....lb.	1.50	1.60
Cresol, USP, 400 lb drums...lb.	...	.20
500 lb drums.....lb.	.14	.17
DIGITALIN Pure, 1 oz vial..oz	15.00	15.50
Dover's Powder, USP, 5 lb tin .....lb.	2.75	2.80
Duboisine Sulfate, 1 oz vl....oz.	35.00	40.00
Emetine Alk, 15 gr vial.....oz.	...	.85
Hydrochloride, USP, 1 oz vl .....oz.	25.00	26.00
15 grain vials.....oz.	2.50	2.70
Epsom Salts, USP, 200 lb bbls .....100 lb.	2.25	2.50
Imp. 100 lb bbls.....100 lb.	2.30	2.35
Ergotin Bonjean, 1 lb jars...lb.	18.50	19.00
Eserine Alk, 1 oz vials.....oz	...	50.00
Salicylate, 1 oz vials.....oz.	...	40.00
Sulfate, USP, VIII 1 oz vials .....oz.	...	40.00
ETHER, USP, 55 lb drums..lb.	...	.11
Anaesthesia, 55 lb drums..lb.	.21	.23
Nitrous, 1 lb bot.....lb.	...	.80
Ethyl Chloride, 200 lb bot...lb.	.22	.24
Ethyl Iodide, 5 lb bot.....lb.	...	6.25
Formaldehyde, USP, 100 lb cbys lc-1 wks.....lb.	.07	.07½
Gall Extract.....lb.	.20	.21
GLANDULAR SUBSTANCES Duodenal Substance, 1 lb lots	...	5.50
Liver Substance (Hepatic) 1 lb lots.....lb.	...	4.50
Orchic Substance (Testicular)	...	4.75
Ovarian Substance, whole, 1 lb lots.....lb.	...	26.00
Ovarian Residue, 1 lb lots....	...	20.00
Pituitary Substance, whole 1 lb lots.....lb.	...	40.00
Pituitary Substance, Anterior Lobe, 1 lb lots.....lb.	...	27.00
Thyroid, U. S. P., 1 lb lots...	...	4.75
Oxgall Powder, 1 lb lots.....	...	1.35
GLYCERIN, CP, 550 lb drums .....lb.	...	11½
Gold Chloride, bottles.....oz.	12.00	12.50
Guaiacol, liq. USP. 100 lb cbys.....lb	1.65	1.75
Crystals.....lb	2.25	2.50
Benzoate, 1 lb bottles.....lb.	...	13.00
Carbonate, 5 lb boxes.....lb.	1.70	2.50
Halazone, 5 lb bot.....lb.	2.75	3.25
Hexamethylenetetramine, USP, 100 lb dr.....lb.	.46	.47
Homatropine Hydrobrom USP. .....oz.	...	14.50
5 oz and 1 oz vials.....oz.	...	13.50
Hydrastine Alk, USP, 1 oz vial .....oz.	20.50	21.00
Hydrochlide, USP, 1 oz vials .....oz.	20.50	21.00
Sulfate, 1 oz vial.....oz.	22.50	23.00
Hydrastinine Hydrochloride, USP, 15 gr vials.....oz.	...	40.00
Hydrogen Peroxide, USP, soln 375 lb bbls.....lb.	.03½	.04½
Hyoscine Hydrobrom, USP, 1 oz vials.....oz.	13.07	35.00 13.57
5 oz, 1 oz vials.....oz.		
Hyoscyamine Alk, crystals, 1 oz vials.....oz.	...	25.07
Amorphous, 1 oz vial...oz.	...	75.07
Hydrobromide, USP, 1 oz vial .....oz.	...	25.00
Sulfate, 1 oz vial.....oz.	...	25.07

Chemicals

Hypoquinone, 100 lb kegs...lb.	...	1.10
ICHTHYOL, tins.....lb.	4.00	4.25
Iodide Arsenous, 5 lb bot...lb.	...	5.20
Arsenous-Mercuric soln, 5 lb bot.....ql	...	.26
Iodine, crude, 200 lb kegs...lb.	4.35	4.35
Resublimed, 10 lb tars....lb.	4.65	4.70
Tincture demis.....gal.	...	4.85
Iodoform, powd 10 lb bot...lb.	...	6.50
Iron & Ammonium Citrate, USP, 50 lb cans.....lb.	.65	.66
Chloride, USP, lump 400 lb bbls.....lb.	.06	.08
Citrate, USP, VIII 25 lb can .....lb.	.94	1.01
Hypophosphite, 5 lb cans..lb.	1.55	1.65
Iodide, 1 lb bottles.....lb.	...	4.28
Phosphate, USP, 50 lb cans .....lb.	...	.69
& Potas Oxalate, 250 lb bbl .....lb.	...	.45
Pyrophosphate, USP, 50 lb .....lb.	.74	.80
& Sod Oxalate, 24 lb box...lb.	...	.30
Sulfate, USP, crys bbls....lb.	.04	.04½
Ferrous dried bbls.....lb.	...	.08
Valerate, tins.....lb.	2.75	3.00
Jalap Resin, USP lumps, 5 lb tins.....lb.	...	4.00
Powdered, tins.....lb.	...	4.65
Lead Acetate, USP, 100 lb kegs .....lb.	.16½	.19½
Iodide, USP, VIII 5 lb bot..lb.	3.20	3.40
Lecithin, 5 oz jars.....oz.	1.00	1.30
Licorice Ext Mass, cases....lb.	.19	.20
Compound powder, bbls...lb.	.11	.13
LITHIUM CARBONATE, 250 lb bbls.....lb.	1.35	1.45
Citrate, USP, 100 lb kegs..lb.	...	1.70
Iodide, 5 lb bottles.....lb.	...	5.65
Lobeline Sulfate, ¼ oz vial...oz.	...	8.75
Magnesium Carbonate, USP, 100 lb bbls.....lb.	.08	.09
English, oz blocks.....oz.	.16	.18
Glycerophosphate, 5 lb tins .....lb	3.20	3.25
Hypophosphite, 5 lb cans..lb.	1.15	1.20
Salicylate, 100 lb kegs....lb	...	1.10
Stearate, bbls.....lb.	.23	.25
Manganese Glycerophosphate, 5 lb tins.....lb.	2.90	3.00
Hypophosphite, USP, VIII 5 lb cans.....lb.	1.35	1.40
Iodide, 1 lb bottles.....lb.	6.40	6.65
MENTHOL, USP, 60 lb cases .....lb.	3.35	3.50
Synthetic, cases.....lb.	3.00	3.10
Mercury Metal, 75 lb flasks...fl.	94.00	95.00
Bichloride, crys 25 lb box..lb.	...	1.42
Gran powd, 100 lb kegs..lb.	...	1.27
Bisulfate, 25 lb boxes.....lb.	...	1.48
Blue Mass, 25 lb boxes....lb.	...	.95
Powd, 25 lb boxes.....lb.	...	.96
Blue Ointment, USP, 50%, 25 lb cans.....lb.	...	1.19
Mild 30%, 25 lb cans....lb.	...	.86
33 1/3% mercury.....lb.	...	.94
Calomel, 50 lb boxes.....lb.	...	1.82
English.....lb.	2.75	2.80
Iodide, green, 25 lb jars....lb.	...	4.80
Red, USP, 25 lb jars...lb.	...	4.89
Yellow, USP, VIII, 25 lb jars.....lb.	4.80	4.80
Red precip, USP, 25 lb boxes .....lb.	...	2.06
Powd., USP, 25 lb boxes.lb.	2.17	2.17
White precip, USP, 25 lb boxes.....lb.	...	2.00
Powd., USP, 25 lb boxes.lb.	...	2.01
Salicylate, 25 lb bot.....lb.	...	2.32
With chalk, USP, 25 lb boxes .....lb.	...	.93
Methanol, Pure 1c-l drs....gal	...	.44
Methyl Salicylate, USP, 50 lb cans.....lb.	.40	.42
Methylene Blue, USP, med 5 lb cans.....lb	2.00	2.05
Milk powd, 150 lb bbls.....lb.	.09	.12
MORPHINE Alk, 5 oz tin...oz.	10.90	10.95
Acetate, 5 oz tins.....oz.	8.75	8.80
Hydrobromide, 5 oz tins, 10 oz lots.....oz.	8.75	8.80
Hydrochloride, 5 oz tins, 10 oz lots.....oz.	8.75	8.80
Ethyl Hydrochloride, 5 oz tins 10 oz lots.....oz.	...	10.85
Sulfate, 5 oz tins, 10 oz lots .....oz.	7.85	8.00
Naphthalene Flake, 175 lb bbls wks.....lb.	.04½	.05
Balls, 250 lb bbls wks.....lb.	.05½	.06
Oxgall, Purified, 5 lb bot....lb.	1.75	2.50
USP, 5 lb bot.....lb.	2.00	2.50
Oxyquinoline Sulfate, tins...lb.	8.50	9.25
Pancreatin, USP, 100 lb....lb.	...	1.90
Paraffin, refd, 200 lb cs slabs 118 -120 deg MP.....lb.	.08	.09
128-132 deg MP.....lb.	.07½	.07½
Para-Aldehyde, USP, 100 lb carboys.....lb.	.48	.50
Pepsin, USP, 100 lbs. 1:3000.lb.	...	2.25
100 lbs. 1:6000.....lb.	...	4.00
100 lbs. 1:10000.....lb.	...	6.50
Peptone, powd, 5 lb bot.....lb.	...	...
PHENOLPHTHALEIN, USP, 100 lb drums.....lb.	.80	.82
5 lb cans 100 lb lots..lb.	.88	.93
Pilocarpine Hydrochloride, USP, 1 oz vials 25 oz lots .....oz.	...	3.25
Nitrate, 25 oz lots.....oz.	...	3.25
Single ounce.....oz.	...	3.50
Alkaloid, 15 gr vials.....vl.	...	.75
Piperadine, 25 oz bottles.....lb.	...	8.00
Popodhyllin 5 lb bottles.....lb.	4.35	4.50
Potassium Acetate, USP, 100 lb kegs.....lb.	.29	.30
Bicarb, USP, crys 320 lb bbls .....lb.	.09½	.10
Bromide, USP, crys 100 lb cs .....lb.	.34	.35
Citrate, USP, 50 lb bbl....lb.	.42½	.43
Guaiacol Sulfonate.....lb.	1.95	2.25
Potassium Hypophosphite, 10 lb cans.....lb.	.75	.80
Iodide, USP, 100 lb cases..lb.	3.50	3.55
Lactophosphate, 4 oz bot..lb.	...	.90
Permangan, USP, crys, 100 lb drs wks.....lb.	.15	.15½
Phosphate dibasic pure, kegs .....lb.	...	.49
Salicylate, 25 lb cans....lb.	...	1.18
Sulfate, USP, VIII, 100 lb kegs.....lb.	.13	.15
Sulfocyanide, CP 15 lb jars lb.	...	.50
Tartrate, CP, tins.....lb.	...	.65
Pyrogallol, USP, see Acid Pyrogallic.....lb.	...	...
Quinidine Alk, 100 oz tins...oz.	.70	.75
Sulfate, 100 oz tins.....oz.	...	.50
QUININE SULFATE, USP, 100 oz tins.....oz.	...	.40
1 oz tins, 100 oz lots....oz.	...	.47
Dutch, 100 oz tins.....oz.	...	.40
Java, 100 oz. tins.....oz.	...	.40
Japanese 100 oz tins.....oz.	...	.40
Acetate.....oz.	...	.74
Arsenate.....oz.	...	.76
Benzoate.....oz.	...	.74
Bisulfate, USP.....oz.	...	.40
Resale.....oz.	...	.39
Citrate.....oz.	...	.51
Dicarbonate, 1 oz tins....oz.	...	2.56
Dihydrobromide.....oz.	...	.54
Dihydrochloride, USP....oz.	...	.54
Ethyl Carbonate, 16 oz tins .....oz.	...	.70
Ferrocyanide.....oz.	...	.74
Formate.....oz.	...	.73
Glycerophosphate.....oz.	...	.72
Hydrobromide, USP.....oz.	...	.50
Hydrochlorosulfate.....oz.	...	.50
Hydrochloride & Urea, USP .....oz.	...	.74
Hypophosphite.....oz.	...	.70
Lactate.....oz.	...	.66
Phenolsulfonate.....oz.	...	.78
Phosphate.....oz.	...	.62
Salicylate, USP.....oz.	...	.52
Tannate, USP.....oz.	...	.41
Tartrate.....oz.	...	.74
Valerate.....oz.	...	.78
& Urea Hydrochloride, USP .....oz.	...	.88
Rennet, N. F. 5 lb 1:25,000...lb.	2.95	3.50
Resorcinol, USP, 25 lb cans..lb.	1.57	1.65
Rochelle Salt, USP, 225 lb bbl .....lb.	.19	.19½
Imp. USP, 300 lb bbls.....lb	...	.23
Rock Sugar, 5 lb boxes.....lb.	...	.15
Saccharin, USP, 10 lb cans...lb.	1.70	1.80
USP, Soluble, 10 lb cans...lb.	1.75	1.85
Salicin, USP.....lb.	...	12.50
SALOL, USP, 100 lb drums..lb.	...	.90
Saltpetre, powd, bbls wks....lb.	.06½	.08¾
Santonin, USP, bulk.....lb.	123.00	133.00
Saponin, refined.....lb.	1.30	1.50
Siedlitz Mixture, 250 lb bb..lb.	...	.17¾
Silver Metal, American.....oz.	...	.42¾
Iodide, 16 oz lots.....oz.	...	.69
Nitrate, 100 oz bottles....oz.	.21¾	.23¾
Nucleinate, bulk.....oz.	...	.37
Proteinate.....oz.	.39	.41
SODIUM BENZOATE, USP, 100 lb bbls.....lb.	.44	.48
Bromide, USP, 100 lb kegs.lb.	.34	.35
Cacodylate, USP, 25 lb bot .....lb.	4.75	5.90
Citrate, USP, X 50 lb kegs.lb.	.34½	.36
USP VIII, 50 lb kegs....lb.	.29½	.31
Glycerophosphate, USP, crys 25 lb cans.....lb.	1.40	1.55
Powder, 25 lb tins.....lb.	1.45	1.60
Soln, USP, 25 lb tins...lb.	1.05	.120
Hypophosphite, USP, 25 lb cans.....lb.	.60	.65
Iodide, USP, 25 lb jars...lb.	4.25	4.30
Phosphate (Mono-Sodium), 100 lb kegs.....lb.	.30	.31
Di-Sodium USP, granular, 275 lb bbls.....lb.	.07½	.08
Pyrophosphate, 100 lb kegs .....lb.	...	.29
Salicylate, 100 lb kegs....lb.	...	.47
Sulfocarbolate, USP, 100 lb kegs.....lb.	...	.25
Sulfocyanate, CP crys, jars included.....lb.	...	.60
Spartein Sulfate, USP, 25 oz bulk.....oz.	.65	.70
Single oz vial.....oz.	.77	.90
STRONTIUM BROMIDE USP, 50 lb kegs.....lb.	.46	.47
Carb, 100 lb kegs wks....lb.	...	.20
Iodide, USP, 25 lb jars....lb.	...	4.00
Lactate, kegs.....lb.	.90	1.10
Nitrate, 600 lb bbls NY...lb.	.08	.08½
Imp. bbls NY.....lb.	.08	.08½
Salicylate, USP, 100 lb keg lb.	...	1.10
Strophanthin, USP, 1 oz vial.oz.	19.00	19.00
Crystals.....lb.	75.00	75.00
Strychnine Alk, USP crys, 100 oz tins.....oz.	...	.61
Powdered.....oz.	...	.51
Acetate.....oz.	...	.65
Arsenate, 25 oz cans.....oz.	...	.65
Glycerophosphite, USP...oz.	...	.65
Hydrobromide.....oz.	...	.65
Hydrochloride.....oz.	...	.65
Hypophosphite.....oz.	...	.75
Nitrate, USP.....oz.	.55	.72
Phosphate.....oz.	...	.65
Sulfate, USP, powd.....oz.	...	.42
Sugar, refined, 275 lb bbl 100 lb	5.80	5.90
Milk, USP, 200 lb bbls...lb.	.18	.20
Sulfonethylmethane, USP, 10 lb boxes.....lb.	3.85	4.05
Sulonmethane, USP, 10 lb box .....lb.	2.65	3.85
Sulfur flwrs, washed, USP, 125 lb bbl.....lb.	...	.06
Iodide, USP, VIII, 5 lb bot lb.	...	4.55
TARTAR EMETIC, USP, 300 lb bbls.....lb.	.32½	.34½
Terebene, tins.....lb.	...	.85
Terpin Hydrate, USP, 100 lb kegs.....lb.	.35	.37
Theobromine Alk, 5 lb cans..lb.	1.90	2.25
Sod. Salicylate, 1 lb bot...lb.	...	2.10
Sod. Benzoate, 1 oz vials...oz.	...	1.00
Thymol, USP, 25 lb tins.....lb.	2.00	2.25
Iodide kegs.....lb.	6.00	7.00
Veratrine Alkaloid.....oz.	...	2.25
Sulfate, 1 oz vials.....oz.	...	2.25
Witch Hazel Ext., 50 gal bbl .....gal.	.60	.80
Zinc Carb, USP, 100 lb keg..lb.	.28	.31
Chloride, USP, 25 jars ex..lb.	.24	.29
Iodide, 5 lb bottles.....lb.	...	5.22
Oxide, USP 100 lb bbls...lb.	.13	.14
Stearate, USP, 50 lb bbl..lb.	.18	.20
Sulfate, USP, 100 lb bbl..lb.	.08	.09
Sulfocarbolate, 100 lb kegs..lb.	.23	.26

Miscellaneous

Castor Oil, odorless, bbls.....lb.	...	.13½
Chalk drop, 175 lb. bbls.....lb.	...	.03½
Precip. light, 250 lb. cask..lb.	...	.04½
Heavy 540 lb. casks.....lb.	...	.02½
Bulk.....ton	...	5.00
English light, bags.....lb.	...	.04½
English light, casks.....lb.	.05½	...
Cocoa Butter, 12 lb. box....lb.	.42	.45
Cod Liver Oil Nor. 30 gal. bbls	30.00	31.00
Newfoundland.....bbl.	...	31.00
Collodion U. S. P. 30 lb. dr...lb.	...	.23
Corn Syrup 42° 50 gal. bbl. .....100 lb.	3.91	4.16
Gelatin, USP, Silver 100 lb. cases.....lb.	.55	.60
Pure Food, 50 lb. bbl.....lb.	.53	.55
Glucose, (grape sugar) dry 70° bags c-l NY.....100 lb.	3.14	3.24
Haarlem Oil, bot 6 gross cases .....gross	...	3.75
Imported, 5 gr. cs.....gross	...	3.50
Kaolin, Bags.....lb.	.06	.08
Colloidal Grade 200 lb. tin lined wooden drums....lb.	.15	.29
Mineral Oil White, 50 gal. bbls. 80-85 vis.....gal.	.45	.50
85-90 vis.....gal.	.65	.70
125-130 vis.....gal.	.75	.85
290 vis.....gal.	.80	.90
Russian 110-115 vis.....gal.	.69	.79
145-155 vis.....gal.	.70	.75
320-330 vis.....gal.	.80	.90
Olive Oil, Edible bbls.....gal.	2.00	2.40
Paraffin Wax, fully refined, slabs 125 @ 127 A.M.P. bags lb.	...	.03
130 @ 132 A.M.P. bags lb.	...	.04½
135 @ 137 A.M.P bags lb.	...	.05
Petrolatum, Lily White, USP, 400 lb. bbl.....lb.	.08	.08½
Snow White USP, 400 lb. bbls.....lb.	.09	.11
Rice Starch, 140 lb bags....lb.	.09	.10
Soap Castile, bars 40 lb. Case .....Cs.	...	12.75
Powd. USP 250 lb. bbls...lb.	.26	.28
Green, USP, 450 lb. bbls...lb.	.07½	.07½
Neutral, powd. bbls.....lb.	.17	.18
Talc, Italian, 220 lb bags...ton.	60.00	80.00
French, 220 lb bags.....ton.	40.00	45.00

Aromatics and Essential Oils

Acetophenene, CP, 1 lb bot..lb.	3.50	3.65
Aldehyde, C 8 (Otcyl) 1 lb bot ..lb.	...	40.00
C 7, 1 lb bot..lb.	4.50	5.50
C 9 (Nonyl), 1 lb bot ...lb.	...	120.00
C 10 (Decyl), 1 lb bot....lb.	...	38.00
C 14, 1 lb bot..lb.	...	22.00
C 16, 1 lb bot..lb.	...	20.00
AMYL ACETATE, pure, 25 lb cans..lb.	.43	.50
Butyrate, 1 lb bot..lb.	1.25	1.50
Butyrate, 5 lb bot..lb.	...	1.00
Cinnamate, 5 lb bot..lb.	9.50	9.75
Formate, 1 lb bot..lb.	...	1.90
Formate, 5 lb bot..lb.	...	1.75
Phenyl Acetate, 1 lb bot...lb.	4.50	5.00
Salicylate, 100 lb cbys....lb.	1.25	1.30
Imported..lb.	2.25	2.50
Anethol, 2 lb bot..lb.	1.50	1.75
Anisic Aldehyde, 1 lb bot...lb.	3.10	3.60
Benzaldehyde, USP, 40 lb cbys ..lb.	...	...
50 lb cbys..lb.	1.35	1.45
FFC, 40 lb cbys..lb.	1.25	1.35
Benzoic Ether, see Ethyl Benzoate		
Benzophenone, 1 lb bot..lb.	2.25	2.75
Benzyl Acetate, 100 lb cbys..lb.	.65	.85
Alcohol, 5 lb bot..lb.	.85	.95
BENZYL BENZOATE.....	1.10	1.15
Medicinal, FFC..lb.	...	1.40
Buytrate, CP, 1 lb bot...lb.	9.25	9.50
Benzyl Cinnamate, 1 lb bot.	7.00	7.25
Formate, 1 lb bot..lb.	3.25	3.35
Propionate, 1 lb bot..lb.	3.00	3.15
Succinate, 1 lb bot..lb.	5.25	5.50
Valerate, 5 lb bot..lb.	3.00	3.25
Borneol, 1 lb bot..lb.	1.50	2.00
Bornyl Acetate, 1 lb bot...lb.	1.70	2.80
Bromstyrol, 25 lb cases....lb.	3.75	3.85
Butyl Anthranilate dom, 1 lb bot..lb.		
Carvol, 5 lb bot..lb.	3.00	3.40
Cinnamic Acid, 5 lb cans....lb.	3.25	3.50
Alcohol liquid, 1 lb bot...lb.	2.50	2.60
Crystallizable..lb.	7.00	8.00
Aldehyde..lb.	2.25	2.50
Imported, 1 lb bot.....lb.	7.75	9.00
Citral, 25 lb cans..lb.	2.25	3.60
Citronellal 1 lb bot..lb.	2.00	4.00
Citronelyl Acetate, 1 lb bot...lb.	4.25	4.50
Coumarin, 25 lb cans.....lb.	3.50	4.00
DECYL ALCOHOL.....lb.	25.00	28.00
Diphenyloxide, 25 lb tins....lb.	1.00	1.15
Diphenyl Methane.....lb.	1.75	2.00
Duodecyl Alcohol.....lb.	20.00	22.00
Ethyl Acetate, pure, 5 lb bot.lb.	.06	.07
Benzoate, 5 lb bot.....lb.	1.50	1.75
Ethyl Butyrate, 5 lb bot....lb.	1.80	2.00
Caproate, 1 lb bot.....lb.	3.25	3.50
Cinnamate, 1 lb bot.....lb.	4.00	4.50
Formate, 5 lb bot.....lb.	1.00	1.25
Methyl Paracresol, 1 lb bot ..lb.	3.25	3.50
Phenyl Acetate, 5 lb bot..lb.	3.75	4.00
Valerate, 5 lb bot.....lb.	...	3.75
Salicylate, 5 lb bot.....lb.	1.95	2.00
Eucalyptol, USP, 50 lb cans..lb.	.75	.80
Eugenol, USP, 25 lb cans....lb.	3.00	3.50
Geraniol, 50 lb cases.....lb.	2.00	2.60
Geranyl Acetate, 1 lb bot....lb.	2.75	2.80
Butyrate, 1 lb bot.....lb.	13.00	13.50
Formate, 1 lb bot.....lb.	12.00	12.50
Heliotropin, 100-10 lbs.....lb.	1.65	1.75
Imported..lb.	1.95	2.05
Hydroxycitronellal, 1 lb.....lb.	5.00	7.00
Indol, CP, 1 oz bot.....oz.	2.90	3.00
IONONE, 1 lb bot 100%...lb.	5.00	6.00
Alpha..lb.	4.50	4.70
Beta..lb.	5.70	5.75
Methyl..lb.	5.00	5.25
Iso Borneol..lb.	2.25	2.35
Iso Bornyl Acetate.....lb.	3.00	3.20
Iso-Butyl Benzoate, 5 lb bot..lb.	2.75	3.00
Iso-Eugenol, 1 lb bot.....lb.	3.75	3.80
Iso-Safrol, 1 lb bot imp....lb.	1.75	1.85
Domestic, 5 lb bot.....lb.	3.50	3.75
Linalol from Bois de Rose, 5 lb bot..lb.	1.90	3.90
Linalyl Acetate, 1 lb bot....lb.	2.00	3.00
Benzoate, 1 lb bot.....lb.	13.00	14.00
Formate, 5 lb bot.....lb.	10.50	12.00
METHYL ACETOPHENONE ..lb.	2.70	2.85
Anthranilate, 1 lb bot.....lb.	2.25	2.30
Imported..lb.	2.70	2.75
Anthranilic Acid.....lb.	11.75	12.00
Benzoate, 5 lb bot imp....lb.	1.75	1.85
Domestic, 5 lb bot.....lb.	1.75	2.00
Cinnamate, 1 lb bot.....lb.	3.75	4.25
Heptenone, 1 lb bot.....lb	3.50	4.00
Paracresol, 1 lb bot.....lb	4.50	8.00
Phenylacetate, 5 lb bot...lb	3.75	4.00
Salicylate, USP, 500 lb dr .lb.	...	.40
50 lb cases..lb.	...	.42
Mirbane rect. 1,000 lb drs...lb.	.12	.13
Musk Ambrette 1 lb cans...lb	7.25	7.50
Ketone 1 lb cans.....lb	7.75	7.90
Xylene 5 lb cans.....lb.	2.25	2.85
Nerolin 1 lb cans.....lb.	1.35	1.40
Octyl Alcohol 1 lb bot.....lb.	30.00	32.00
Oenanthic Ether lb bot....lb.	1.90	2.00
Oleoresin Aspidum..... USP, bot and tins.....lb.	...	1.25
Capsicum, USP, bot and tins ..lb.	3.50	4.25
Cubeb, USP, bot and tins..lb.	3.00	3.25
Ginger bot and tins.....lb.	2.85	3.35
Malefern see Aspidum.....		
Orris, bot & tins.....lb.	15.00	18.00
Pepper, black, USP, bot & tin.....	...	9.50
Vanilla, bot & tins.....lb.	8.00	8.75
Paracresol Methyl Ether....lb.	6.50	6.75
Paracresyl Acetate.....lb.	5.50	5.75
Para Cymene Refd 110 gal dr ..gal.	2.25	2.50
PHENYLACETALDEHYDE 50% 1 lb bot.....lb.	4.75	5.00
Imported 50%.....lb.	4.75	5.00
100%.....lb.	8.00	8.25
Phenylacetic Acid 1 lb bot..lb.	2.65	2.90
Phenyl Diacetate 1 oz bot...oz.	3.00	3.25
1 lb bot..lb.	8.00	10.00
Imported..lb.	7.00	7.75
Phenylethyl Alcohol 1 lb bot.lb.	4.40	4.65
Phenyl Ethyl Acetate.....lb.	8.25	8.75
Butyrate 1 lb bot.....lb.	15.00	16.00
Formate, 1 lb bot.....lb.	19.00	21.00
Propionate, 1 lb bot.....lb.	16.00	18.00
Valerate, 1 lb bot.....lb.	19.00	20.00
Phenylpropylalcohol, 1 lb bot ..lb.	8.50	9.00
Rhodinol, 1 lb bot.....lb.	6.25	20.00
Saffrol, drums.....lb.	.30	.32
60 lb cans.....lb.	.32	.34
Skatol, 1 oz bot.....lb.	4.50	7.00
Terpinyl Acetate, 25 lb cans..lb.	.85	.90
Imported, 25 lb cans.....	.85	.90
TERPINEOL, CP, 1000 lb drs ..lb.	.27	.29
50 lb cans.....lb.	.31	.33
Absolute, 25 lb cans....lb.	.48	.50
Imported, 25 lb cans...lb.	.58	.60
Valerianic Ether see Ethyl Valerate.....		
Vanillin (Clove Oil), USP.lb.	5.50	5.75
(Guaiacol) USP.....lb.	5.00	5.25

Essential Oils

Almond Bitter, USP, 5 lb bot lb.	2.25	2.35
Bitter, ffPA, 5 lb bot.....lb.	2.35	2.50
Sweet, 56 lb cans.....lb.	.45	.48
Almond Meal, 25 lb cans....lb.	.20	.21
Amber crude, 25 lb tins.....lb.	.15	.17
Rectified, 25 lb tins.....lb.	.50	.53
Amber liquid, 400 lb drs.....lb.	2.20	2.30
Ambergris, Black, boxes.....oz.	14.00	15.00
Gray boxes.....oz.	32.00	36.00
Angelica Root, 1 lb bot.....lb.	25.00	35.00
Anise Tech, 400 lb drums...lb.	.44	.46
USP, 60 lb cans.....lb.	.46	.48
Apricot Kernel, 50 lb cans...lb.	.26	.27
Bay, 25 lb tins N. F. V., 50.55% Phenol.....lb.	2.00	2.20
Terpeneless.....lb.	4.25	4.45
BERGAMOT, 25 lb coppers.lb.	2.00	2.25
Terpeneless.....lb.	6.25	9.25
Artificial, 25 lb cans.....lb.	1.25	1.50
Birch, Sweet, Northern, 25 lb tins.....lb.	3.00	3.10
Southern, 25 lb tins.....lb.	...	1.85
Birch Tar, rect., 5 lb bot.....lb.	.50	.55
Crude, 50 lb tins.....lb.	.13	.14
Bois de Rose, tins..... Brazillian.....lb.	.90	1.00
Cayenne, tins.....lb.	1.40	1.60
Cade, 25 lb cans.....lb.	.25	.26
Cajuput, native, 50 lb tins..lb.	.57	.62
Calamus, 5 lb bot.....lb.	2.75	3.00
Camphor Sassa, 1000 lb drs..lb.	.21	.22
White, 400 lb drs.....lb.	.17	.18
Cans, 50 lbs.....lb.	.19	.20
CANANGA, Native 25 lb tins ..lb.	1.75	1.90
Rectified, 25 lb tins.....lb.	2.10	2.20
Caraway, USP.....lb.	1.50	1.65
Cardamon, NF, 1 lb bot.....lb.	20.00	25.00
Cascarilla, USP, 1 lb bot.....lb.	65.00	80.00
Cassia.....	.95	1.00
Redist, USP, 50 lb cans...lb.	.85	1.00
Cedar Leaf, 50 lb tins.....lb.	...	.37
Cedar Wood, light, 1000 lb drs ..lb.	.35	7.50
Celery, 1 lb bot.....lb.	...	1.50
Chaulmoogra, USP 80 lb cases lb.	9.00	10.00
Cinnamon Ceylon, 1 lb bot...lb.	1.85	1.95
Leaf, 5 lb bot.....lb.		
CITRONELLA Ceylon, 1000 lb drs.....lb.	.38	.40
50 lb tins.....lb.	.40	.42
Java, 400 lb drs.....lb.	.52	.54
50 lb tins.....lb.	.54	.56
Civet, Abyssin, horns.....oz.	2.10	3.00
Cloves, USP, 50 lb cans.....lb.	1.35	1.40
6 lb bot.....lb.	1.95	2.00
Copaiba.....lb.	.45	.50
Coriander, USP, 10 lb bots..lb.	4.50	5.00
Croton USP, 25 lb tins.....lb.	4.75	5.25
Cubebs, USP, 5 lb bot.....lb.	2.70	2.80
Cumin, 1 lb bot.....lb.	7.00	7.50
Dill, 25 lb cans.....lb.	3.75	5.25
Erigeron, 20 lb tins.....lb.	1.25	1.35
EUCALYPTUS Austl, USP, 56 *lb cans, cases*.....lb.	.39	.40
500 lb drs.....lb.	.36	.37
Fennel, USP, 25 lb tins.....lb.	.95	1.10
Geranium African, 25 lb tins..lb.	4.10	5.10
Bourbon, 28 lb tins.....lb.	3.75	4.50
Turkish, 28 lb tins.....lb.	2.15	2.40
Ginger, 1 lb bot.....lb.	4.35	4.50
Gingergrass, 28 lb tins.....lb.	2.50	2.70
Grape Fruit.....lb.	2.90	3.00
Hemlock, 25 lb tins.....lb.	1.00	1.05
Juniper Berries, USP, 25 lb tins ..lb.	1.50	1.55
Wood, 50 lb tins.....lb.	.50	.60
Labdanum, 5 lb bot.....lb.	5.50	6.00
LAVENDER, USP, 28 lb tins ..lb	1.90	2.10
Spike Spanish, 50 lb cans..lb.	.43	.48
Lemon Ital, 25 lb cans.....lb.	1.10	1.15
California 35 lb cbys....lb.	.80	1.05
Lemongrass, native, 50 lb cans ..lb.	.65	.67
Limes, expressed, 25 lb tins..lb.	12.75	14.40
Distilled, 25 lb tins.....lb.	10.50	11.00
Linaloe Mex., 70 lb cases....lb.	...	1.75
Mace, distilled, 50 lb tins....lb	1.20	1.25
Mandarin, 25 lb cases.....lb.	4.35	4.85
Musk Pods Cabardine, tins..lb.	...	...
Musk Tonquin, tins, Pods...oz.	24.00	26.00
Grains Cabardine, tins....oz.	...	...
Tonquin, tins, Grained..oz.	28.00	34.00
MUSTARD, USP, 1 lb bots.lb.	9.50	10.00
Artif, USP, 5 lb bot.....lb.	1.55	1.65
Neroli Bigarade, ½ & ¼ & 1 lb bot ..lb.	125.00	250.00
Petale, 1 lb bot.....lb.	160.00	170.00
Artificial, 1 lb bot.....lb.	5.00	15.00
Nutmeg, USP, 50 lb tins....lb	1.05	1.10
ORANGE BITTER, 25 lb tins ..lb	2.35	2.60
Sweet W Ind, 25 lb tins..lb	1.85	2.00
Italian, 25 lb cop.....lb	2.05	2.30
Orange American, Cold pressed 25 lb tins.....lb.	1.85	1.90
Distilled, 25 lb tins.....lb.	1.00	1.05
Spanish, 25 lb tins.....lb.	...	2.25
Oil Orris, concrete.....oz.	4.75	5.00
Origanum, 50 lb cans tech...lb.	.25	.27
Parsley, 1 lb bot.....lb.	7.50	7.75
Patchouli, 5 lb bot.....lb.	4.50	4.85
Pennyroyal, dom, 25 lb tins..lb.	1.75	1.95
Imported, 25 lb tins.....lb.	...	1.05
Pepper Black lb.....	...	8.00
Peppermint, nat. 60 lb cases lb.	1.85	1.95
Redis, USP, 60 lb cs.....lb.	2.00	2.15
Petit Grain S A., 25 lb tins..lb.	1.25	1.35
French, 1 lb bot.....lb.	4.50	4.75
Italian, 25 lb tins.....lb.	2.20	2.30
Pimento Leaf, 25 lb tins....lb.	1.50	1.65
Berries, 25 lb tins.....lb.	3.00	3.10
Pineedle Siberian, cans.....lb.	.60	.65
Pinus, Sylvestris, 25 lb tins..lb.	1.30	2.00
Pumilio, USP, 25 lb tins...lb.	1.90	1.95
Rose Ft, 8, 16, & 32 oz pkgs..lb.	14.00	17.00
Bulg, 8, 10 & 32 oz pkgs...oz.	11.25	12.25
Rosemary, USP, 27½ lb tins..lb.	...	.44
1000 lb drums.....lb.	...	.43
Tech, 25½ lb tins.....lb.	...	.37
Rue, 1 lb bot.....lb.	3.00	3.10
SANDALWOOD, E Ind ,USP, 100 lb case.....lb.	7.50	7.75
W Indian *(Amayris)*, 25 lb tins.....lb.	2.85	2.95
Australian, Tins.....	5.65	5.65
Sassafras, USP, 50 lb cans...lb.	1.10	1.12
Artificial, 1000 lb drs, 60 lb cans.....lb.	.27	.29
Safrol, cans.....lb.	.36	.38
Savin, 50 lb tins.....lb.	2.10	2.35
Snakeroot, Canada.....lb.	8.50	8.75
SPEARMINT, USP, 50 lb tins ..lb	1.85	2.00
Spruce, 50 lb tins.....lb.	.95	1.00
Tansy, American, 25 lb tins..lb.	2.60	2.75
Tar, 50 gal bbls.....lb.	.25	.30
USP, 50 gal bbls.....lb.	.75	1.50
Thyme, red, NF, 25 lb tins..lb.	.65	.68
White, NF, 25 lb tins.....lb.	.83	.85
Tech, 110 lb drums.....lb.	.60	.70
Turpentine, USP, rect cbys..lb.	.27	.30
Vetivert Bourbon, 10 bot....lb.	4.75	5.00
Indian, 1 lb bot.....lb.	25.00	38.00
Java, 1 lb bot.....lb.	12.00	13.00
Wine, heavy, 1 lb bot.....lb.	1.50	1.60
WINTERGREEN Gaultheria, true, 25 lb tin.....lb.	8.00	10.00
Southern, 25 lb tins....lb.	3.75	4.00
Synthetic see Methyl salicylate.....		
Wormseed, Balt, 25 lb tins..lb.	2.65	2.85
Wormwood, dom, 25 lb tins..lb.	6.50	6.75
Ylang Ylang Bourbon, 10 lb tins No. 1.....lb.	5.25	5.50
10 lb tins No. 2.....lb.	5.20	5.25
Manila, 1 lb bot.....lb.	30.00	36.00

Drugs and Spices

Aconite Root, USP, bags	lb.	.13	.14
Agar Agar, No. 1, bales	lb.	1.10	1.15
Agar Agar No. 2, bales	lb.	1.00	1.05
Almonds Meal	lb.	.40	.41
Aletris Root, bags	lb.	.22	.23
Alkanet Root, bags	lb	.09	.10
ALOES, Cape, 400 lb cases	lb.	.11	.12
Curacao, 100 lb cases	lb.	.25	.27
Socotrine, Whole, 300 lb cs	lb.	.32	.37
Althea Root, bags	lb.	.20	.22
Cut cases	lb.	.18	.25
Angelica Root, bags	lb.	.13	.14
Angostura Bark, bags	lb	.18	.19
Anise Star case	lb	.10½	.11
Spanish, bags	lb	.08	.08½
ARABIC GUM, White, No. 1, 220 lb bags	lb.	.21	.22
Seconds, 220 lb bags	lb.	.20	.21
Sorts, Amber, 220 lb bags	lb.	.09	.09½
Powd, USP, 300 lb bbls	lb.	.14	.17
Areca Nuts, 100 lb bbls	lb.	.05	.07
Powd, 100 lb bbls	lb.	.10	.11
Arnica Flowers, bales	lb.	.11½	.13½
Root, bags	lb.	.42	.43
Arrowroot, St. Vincent, powd bbls	lb.	.08	.09
Asafoetida, 250 lb cases	lb.	.19	.20
Powd, 50 lb boxes	lb.	.35	.36
Balm Gilead Buds, bags	lb.	.28	.33
Balmony Herbs, bales	lb.	.22	.24
BALSAM COPAIBA Para, 80 lb cases	lb.	...	.23
South American, USP, 80 lb cases	lb.	...	.24
Peru, 120 lb cases	lb.	1.35	1.70
Tolu, 90 lb cases	lb.	.95	1.00
Barberry Bark, of root, bags	lb.	.17	.19
Bayberry Bark, bales	lb.	.08	.09
Wax bbls	lb.	.29	.32
BELLADONNA LEAVES, bale	lb.	.14	.16
Root, bags	lb.	.11	.12
Bees Wax, White, cases	lb.	.38	.42
Yellow refined cases	lb.	.28	.32
Yellow Crude Cases	lb.	.23	.25
Benzoin Gum, Siam, boxes	lb.	1.20	1.30
Sumatra, cases	lb.	.30	.31
Berberis Aquafolium Root, bags	lb.	.09	.10
Beth Root, bags	lb.	.09	.10
Black Indian Hemp Root, 100 lb bags	lb.	.12	.13
Blood Root, bags	lb.	.11	.11½
Blueflag Root, bags	lb.	.13	.14
Boldo Leaves, bales	lb.	.15	.17
Boneset Herb, bales	lb.	.08	.09
Borage Flowers, bales	lb.	.12	.13
Broomtop Herb Cut, bales	lb.	.07	.08
Bryonia Root, bags	lb.	.10	.11
BUCHU LEAVES Short, 250 lb. bales	lb.	.20	.21
Long bales	lb.	.75	.80
Buckbean Leaves, bales	lb.	.07	.08
Buckthorn Bark, bags	lb.	.04½	.05
Berries, bags	lb.	.30	.35
Burdock Root, bags	lb.	.08	.09
Seed bags	lb.	.30	...
Burgundy Pitch, 110 stand gross for net	lb.	.08	.09
Imported	lb.	.10	.11
Calabar Beans, bags	lb.	.20	.21
Calamus Root, blchd cases	lb.	.35	.36
Unbleached, bags	lb.	.07	.08½
Calendula Petals, imp bales	lb.	.30	.35
Calisaya Bark, bales	lb.	.19	.20
Powdered, bbls	lb.	.25	.26
Canary Seed, South America, bags	lb.	.05	.05½
Dutch, bags	lb.	.05	.06
Candelilla Wax, bags	lb.	.13½	.14
Cannella Alba Bark, bales	lb.	.25	.26
Cannabis, U.S.P.	lb	.19	.26
Cantharides, Chinese, cases	lb.	.35	.40
Powdered, boxes	lb.	.60	.63
Russian, cases	lb.	.70	.75
Powdered, boxes	lb.	.75	.77
Caraway Seed, African, bags	lb.	.04½	.05½
Dutch, 11 lb bags	lb.	.06½	.06½
Cardamon bleached, cases	lb.	1.25	1.33
Decorticated, cases	lb.	.56	.57
Cascara Amarga, 150 lb bbls	lb.	Nom	...
So called bales	lb.	.50	.75
CASCARA SAGRADA, 1928 bark	lb.	.17	.18
1929 bark	lb.	.16½	.18
1930 bark	lb.	.12	.13
Cascarilla Bark, quills, bales	lb.	.90	1.00
Siftings, bbls	lb.	.65	...
Cassia Batavia No. 1 bbls	lb.	.07½	.07½
Shortstick, bales	lb.	.06½	.07
Batavia No. 3, bales	lb.	.06	.06½
China Select Rolls, cases	lb.	.03½	.03½
Broken, bales	lb.	.05½	.05½
Saigon, thin	lb.	.22	.23
Buds, cases	lb.	.17	.18
Fistula, baskets	lb.	.08	.09
Catnip, Herb, bales	lb.	.20	.21
Celery Seed, bales	lb.	.17	.17½
Ceresin Wax, White, bags	lb.	.15	.20
Yellow 200 lb. bags	lb.	.11	.14
Imp. 100 lb. bags	lb.	.25	.38
CHAMOMILE FLOWERS Roman, bales	lb.	.37	.40
Hungarian, cases	lb.	.15	.17
Charcoal Willow, powd, bbls	lb.	.06	.06½
Wood, powd, bbls	lb.	.04	.05
Chestnut Bark	lb.	.07	.08
Leaves bales	lb.	.05	.05½
Chicle Gum, lb bbls	lb.	.58	.75
Chiretta, bales	lb.	.16	.19
Cinnamon, Ceylon, No. 1, bales	lb.	.15	.16
No. 2 bales	lb.	.12½	.13
No. 3 bales	lb.	.11½	.12
Clover Tops, Red, bags	lb.	.07	.08
Cloves Zanzibar, 135 lb bbl	lb.	.18	.18½
Cochineal, Black	lb.	.69	...
Silver	lb.	.85	...
Cohosh Root, Black, bags	lb.	.05	.06
Blue, bags	lb.	.06	.07
Colchicum Root, bags	lb.	.07	.08
Seed, bags	lb.	.65	.70
COLOMBO ROOT, bags	lb.	.06	.07
Colocynth Pulp, bales	lb.	.19	.20
Coltsfoot Leaves, bags	lb.	.06	.07
Comfrey Root, bags	lb.	.10	.11
Condurango Bark, bags	lb.	.09	.10
Coriander Seed, Morocco, bags	lb.	.02½	.03
Bleached, bags	lb.	.05½	.06
Corn Silk, bales	lb.	.05½	.06½
Cotton Root Bark, bales	lb.	.07	.08
Cowhage, 1 oz tins	lb.	1.00	...
Cramp Bark so called bales	lb.	.05½	.06
True, bags	lb.	.28	.30
Cranesbill Root, bags	lb.	.09	...
CUBEB BERRIES, XX bags	lb.	.32	.33
Powdered, boxes	lb	.34	.35
Culvers Root, bags	lb.	.14	.15
Cumin Seed, Malta, bags	lb.	.12½	.12½
Morocco, bags	lb.	.10½	.11
Cuttlefish, Bone Trieste, Straps	lb.	.22	.24
French, boxes	lb.	.22	.23
Powdered, bbls	lb.	.09	.10
Broken, bales	lb.	.07	...
Damiana Leaves, bales	lb.	.15	.16
Dandelion Root, Imp. bags	lb.	.12	.13
Deer Tongue Leaves, bales	lb.	.11	.13
Digitalis Leaves, bales	lb.	.12	.13
Dogwood Bark, Jamaica bags	lb.	.08	.09
American bales	lb.	.06½	...
Doggrass Root, USP, cut bags	lb.	.18	.19
Dragons Blood Mass, cases	lb.	.65	.70
Reeds, boxes	lb.	...	1.05
Echinacea Root, bags	lb.	.17	.18
Elcampane Root, bags	lb.	.05	.06
Elder Flowers, bags	lb.	.25	.29
Elemi Gum, 85 lb cases	lb.	.26	.28
Elm Bark, bundles	lb.	.19	.22
Grinding bags	lb.	.09	.10
Powdered, bbls	lb.	.16	.18
Ephedra Vulgaris, bales	lb.	.07	.08
ERGOT, 150-200 lb bags	lb.	.45	.63
Eucalyptus Leaves, bales	lb.	.05	.06
Euphorbia Pilulifera, Herb, bags	lb	.05	.08
Euphorbium Gum, cases	lb.	.14	.20
Fennel Seed, French, bags	lb.	.08	.08½
German bags	lb.	.08	.10
Foenugreek Seed, 200 lb bags	lb.	.04½	.04½
Fish Berries, 100-125 lb bag	lb.	.06	.07½
Flax Seed, Whole 182 lb bbls	lb.	14.50	15.25
Ground, 180 lb bbls	lb.	.06	.06¼
Fringe Tree Bark or Root bags	lb.	.13	.15
Fumigating Pastiles, boxes	lb.	.30	.35
Galangal Root, bags	lb.	.08	.09
Galbanum Gum, cans	lb.	.90	1.00
Gamboge Gum, 100 lb cases	lb.	.70	.75
Powdered, cases	lb.	...	.85
Gelsemium Root, bags	lb.	.06½	.07½
GENTIAN ROOT, bags	lb.	.07	.08
Ground bbls, boxes	lb.	.10	.11
Powdered, bbls, boxes	lb.	.10	.11
Ginger, African, bags	lb.	.05½	.06
Jamaica Grinding bags	lb.	.08½	.08½
Cochin ABC & Lemon, bags	lb.	.12	.12½
Ginseng Root, cultivated cs	lb.	8.00	10.00
Wild Southern, cases	lb.	...	16.00
Golden Seal Root, bags	lb.	1.10	1.15
Powdered, boxes	lb.	1.50	1.55
Herb, barrels	lb.	1.25	1.30
Grains of Paradise, bags	lb.	.10	.15
Grindelia Robusta, Herb, bale	lb.	.07	.08
Guaiac Gum, 150 lb cases	lb.	.32	.33
Strained 75 lb cases	lb.	.70	.75
Guarana, tin cases	lb.	1.00	1.25
Hellebore Root, Black, bbls	lb.	.05½	.06
White, 250 lb bbls	lb.	.07½	.08½
Powdered	lb.	.11	.12
Helonias Root, bags	lb.	.40	.42
Hemp Seed, bags	lb.	.03½	.03½
Henbane Leaves, USP, bales	lb.	.10	.11
HENNA LEAVES, bales	lb.	.10	.11
Powdered	lb.	.14	.15
Hops, bales	lb.	...	.23
Horehound, Herb, bales	lb.	.07	.08
Hydrangea Root, bales	lb.	...	.06
IPECAC ROOT, Carteagna, bags	lb.	1.25	1.30
Powdered, 220 lb bbls	lb.	1.50	1.55
Isinglass, American, 130 lb cases	lb.	.95	1.00
Russian (Beluga), boxes	lb.	4.50	...
Jaborandi Leaves, bales	lb.	.08	.08½
Jalap Root, Whole, 150 lb bag	lb.	.18	.20
USP, Powd, 250 lb bbls	lb.	.23	.26
Japan Wax 24 lb cases	lb.	.18½	.19
JUNIPER BERRIES, 125 lb bags	lb.	.04½	.05½
Kamala, boxes	lb.	.55	.60
Karaya Gum, Powdered, bbls	lb.	.12	.20
Kava Kava Root, bags	lb.	.13	.14
Kino Gum, Black, cases	lb.	.50	.55
Kola Nuts, 150 lb bags	lb.	.06½	.07½
Lady Slipper Root, bags	lb.	.45	.50
Larkspur Seed, bags	lb.	.30	.35
Laurel Berries, bags	lb.	.08	.09
Leaves, Greek, bags	lb.	.05½	.06½
Italian, bales	lb.	.08	.09
Lavender Flowers, Ordinary	lb.	.18	.20
Selected	lb.	.32	.33
Lemon Peel, bags	lb.	.09	.10
LICORICE ROOT, Whole bbls	lb.	.12	.15
Spanish Natural bales	lb.	.05½	.07
Powdered, bbls	lb.	.08	.10
Selected 2 & 5 lb bdls	lb.	.12	.15
Cutting, 125 lb bags	ln.	.06	.06½
Turkish, 150 lb bales	lb.	.05	...
Linden Flowers with leaves, bales	lb.	.15	.16
Without leaves, bales	lb.	.21	.22
Liverwort Leaves, bales	lb.	.15	.16
Lobelia, Herb, bales	lb.	.08½	.09½
Seed, bags	lb.	.35	.40
Lovage Root, Imp., bags	lb.	.22	.24
Lupulin N. F., tins	lb.	1.40	1.45
Lycopodium, 88 lb. cases	lb.	.37	.39
MACE SIAUW, No. 1, cases	lb.	.35	.36
Banda No. 1, cases	lb.	.44	.45
Batavia No. 2, cases	lb.	.34	.35
Malva Flowers, Blue, bales	lb.	.37	.39
Black, bales	lb.	.28	.43
Leaves, bales	lb.	.13	.14
Manaca Root, bales	lb.	.24	.25
Manna, Large Flake, cases	lb.	.62	.64
Small Flake, cakes	lb.	.39	.47
Sorts, cases	lb.	.45	.50
Mandrake Root, bags	lb.	.10	.11
Marjoram, Herb French, No. 1 bales	lb.	.15½	.16
German, bales	lb.	.13	.14
Mastic Gum, 120 lb cans	lb.	.65	.70
Matico Leaves, bales	lb.	.18	.21
Mezereon Bark, bags	lb.	.15	.16
Millet Seed, Yellow, bags	lb.	.02½	.03
Montan Wax, Crude, bags	lb.	.06½	.07
Bleached, bags	lb.	.25	.28
Moss, Iceland, bales	lb.	.10	.12
Irish, Bleached, bales	lb.	.10	.13
Mullein Flowers, tins	lb.	.75	.80
Leaves, bales	lb.	.07½	.08
Musk Root, Russian, bags	lb.	.07½	.08½
Myrrh Gum, 200 lb, cases	lb.	.18	.20
Nutgalls, Chinese, bags	lb.	.22	...
Aleppy, bags	lb.	...	Nom.
Powdered, bags	lb.	.23	...
Nutmegs, 110's cases	lb.	.14½	.15
75's & 80's cases	lb.	.16½	.17
Grinding, bags	lb	.18	.19
NUX-VOMICA Buttons, bag	lb.	.05	.06
Powdered, 200 lb bbls	lb.	.08	.09
Oak Bark, bags	lb.	.06	.06½
Olibanum Gum, 280 lb cases Siftings	lb.	.09	.10½
Tears, No. 1 Extra	lb.	.24	.25
No. 2	lb.	.16	.18
No. 3	lb.	.13	.15
Opium Gum, USP, cases	lb.	12.00	13.00
Granular, cans	lb.	13.00	14.00
Powdered, USP, cans	lb.	13.00	14.00
Orange Flowers, cases	lb.	.30	.35
Peel, Bitter, bags	lb.	.07	.08
Sweet bags,	lb.	.08	.09
ORRIS ROOT, Flor. bid. bags	lb.	.15	.16
Powdered, 200 lb bbls	lb.	.17	.19
Verona, bags	lb.	.09½	.10
Powdered, 200 lb bbls	lb.	.16	.17
Fingers, boxes	lb.	.95	1.00
Ozokerite Wax, Brown, Hard	lb.	...	...
Bags	lb.	.24	.25
Green, Hard, bags	lb.	.30	.31
Yellow, Refined, bags	lb.	.37	...
Papain, Crude, 150 lb cases	lb.	2.25	2.30
Pure, Powdered, 10 lb bot	lb.	2.45	2.50
Paprika, bags	lb.	.20	.20½
Pareira Brava Root, bags	lb.	.13	.14
Passion Flower, bales	lb	.05	.06
Patchouli Leaves, bales	lb.	.18	.19
Pennyroyal, Herb, 100 lb bags	lb.	.07	...
Leaves, 100 lb bags	lb.	.20	.21

PEPPERMINT LEAVES, Imp bales...lb.	.30	.40
Domestic, bales...lb.	.24	.28
Pichi Leaves, bags...lb	.10	.11
Pimento Select, bags...lb.	.05¼	.05½
Pink Root, True, bags...lb.	.35	.37
Pleurisy Root, bags...lb.	.15	.16
Poke Berries, bags...lb.	...	.18
Root, 200 lb bales...lb.	.06	.06½
Pomegrant Bark of Root, bags ...lb.	.29	.34
Bark of Fruit, bags...lb.	.23	.28
Bark of Tree, bags...lb.	.15	.18
POPPY FLOWERS, Red, bags ...lb.	.45	.50
Prickly Ash Bark...lb.	.12	.15
Southern bags...lb.	.11	.11½
Northern, bags...lb.	.15	.16
Berries, bags...lb.	.21	.22
Prince's Pine, bales...lb.	.17	.22
Psyllium Seed, Black, bags..lb.	.50	.60
Plantago Seed, Blonde, Bags.lb.	.08	.09
Pulsatilla, Herb, bags...lb.	.10	.11
Pumpkin Seed, bags...lb.	.11	.12
Pyrethrum Flowers...lb.	.18	.19
Pwd., pure, 200 lb.bbls..lb.	.22	.23
Quassia Chips, bags...lb.	.06½	...
Quebracho, bulk, 125 lb. bbl.lb.	.22	.23
Quince Seed, bags...lb.	1.50	1.60
Persian, bags...lb	1.85	1.90
Rape Seed, South American, bags...lb.	.05¼	.06
Dutch, bags...lb.	.06	.06½
Raspberries, Dried, bbls....lb.	.60	.65
Red Saunders, bags...lb.	.08	...
Rhatany Root, bags...lb.	.10	.11
Rhubarb Root, HD, cases...lb.	.15	.17
Powdered, bbls...lb	.20	.22
Rosemary Leaves, bales...lb.	.05	.05½
Flowers, cases, bales...lb.	.25	.30
Rose Petals, pale...lb.	.20	.21½
Red...lb.	.50	.55
Rue, Herb, bales...lb.	.18	.20
Sabadilla Seed, bags...lb.	.19	.19½
Powdered, bbls...lb.	.20	.20½
SAFFRON FLOWERS, American, bales...lb.	.24	.25
Valencia, 1 lb cans...lb.	10.50	10.75
Sage Dalmatian, bales...lb.	.05½	.06
Sandarac Gum, 300 lb bbls..lb.	.30	.35
Sarsaparilla Root, Honduras, bales...lb.	.45	.46
Mexican, bales...lb.	.17	.19
Sassafras Bark, Ordinary, bales ...lb.	.08	.10
Select, bales...lb.	.16	.18
Savory Leaves, bale...lb.	.06½	.07
Saw Palmetto Berries, bags.lb.	.07½	.08½
Scammony Resin, boxes...lb.	1.30	1.35
Root, bags...lb.	.08½	...
Senega Root, bags...lb.	.65	.70
SENNA ALEX., 150 lb cases lb.	.25	.30
Half leaf 150 lb cases...lb.	.12½	.14½
Sifting, 400 lb bales...lb.	.11	.11½
Tinnevelly, Bold, 350 lb bales ...lb.	.16	.18
Medium Leaf...lb.	.10	.11
Small Leaf...lb.	.07	.09
Pods, 350 lb...lb.	.18	.19
Powdered, 200 lb...lb.	...	.10
Serpentaria Root, bags...lb.	.36	.37
Simaruba Bark, bales...lb.	.25	.27
Skullcap Leaves, Eastern, bales ...lb.	.35	.40
Western, bales...lb.	.20	.30
Skunk Cabbage, Striped, bales ...lb.	.12	.14
Snake Root, Canada Natural, bags...lb.	.26	.27
Canada, Stripped, bags...lb.	...	.50
Soap Bark...lb.	.12	.13
Cut, 125-175 lb bags...lb.	.08½	.09
Crushed, 200 lb bbls...lb.	.16	...
Powdered, bbls...lb.	.12	.13
Spearmint Leaves, American, bales...lb.	.22	.23
Spermaceti, blocks, cakes, cases ...lb.	.32	.35
Spikenard Root, bags...lb.	.08½	.09
Squaw Vine, bales...lb.	.13	.14
Squills, White...lb.	.05	.06
Powdered, bulk...lb.	.23	.25
Stavesacre Seed, bags...lb.	.14	.15
Stillingia Root, bags...lb.	.08	.09
Stone Root, bags...lb.	.08	.09
St. Ignatius Beans, bags....lb.	...	Nom.
St. John's Bread, bags...lb.	...	.09
STRAMONIUM LEAVES, bales...lb.	.12	.14
Seed, bags...lb.	.07½	...
Strophanthus Seed, Kombe, bags...lb.	2.00	2.25
Styrax Liquid, Artificial...lb.	.26	.35
Genuine, USP...lb.	.38	.43
Sunflower Seed, bags Calif...lb.	.04½	.05
South American, bags....lb.	.07	.07½
Tamarinds, bbls...lb.	.05½	.06½
Kegs...keg	3.85	...
Tansy, Herb, bales...lb.	.14	.15
Thus Gum, 280 lb bbls...lb.	.08	.17
THYME, Spanish, bales....lb.	.08	.08½
French, bales...lb.	.06½	.06½
Tonga Root, bundles...lb.	.25	.26
Bark, bundles...lb.	.25	.26
Tonka Beans, Angostura Cases ...lb.	1.75	1.85
Para cases...lb.	.90	...
Surinam cases...lb.	1.00	1.10
Tragacanth Gum, No 1, 100 lb. cases...lb.	1.35	1.40
No. 2...lb.	1.25	1.30
No. 3...lb.	1.10	1.20
Powdered, 50 lb boxes....lb.	.80	.90
Turkish cases...lb.	.50	.90
Turmeric Root Madras, bags.lb.	.06½	.07
Aleppy bags...lb.	.05⅝	.05¾
Powdered...lb.	.13	.15
China bags...lb.	.11	.12
Turpentine Venice True, 80 lb cases...lb.	.32	.40
Artificial, 80 lb cases...lb.	.17	.18
Uva Ursi Leaves, bales...lb.	.05	.05½
Valerian Root, Belgium bags ...lb	.09	.10
VANILLA BEANS, Mexican, whole, cases...lb.	4.00	4.50
Cuts, cases...lb.	2.50	2.65
Bourbon, cases...lb.	1.00	1.50
Vetivert Root, 100 lb bags..lb.	.25	...
Violet Flowers, bags...lb.	.80	.85
Wahoo Bark of Root, bags..lb.	.32	.33
Bark of Tree, bags...lb.	.19	.20
White Pine Bark, Roseed, bags ...lb.	.06	.08
White Poplar Bark, bags....lb.	.06	.07½
Wild Cherry Bark, Natural thin, Green...lb.	.06	.07
Rossed bales...lb.	.09	.10
Thick Rossed, bales....lb.	.04	.05
Wild Indigo Root, bags....lb.	.13	.14
Willow Bark, bags...lb.	.05	.05½
White, bags...lb.	.15	...
Witch Hazel Bark, bags....lb.	.05	.06
Leaves, bales...lb.	.07	.08
Wormseed, American, bags..lb.	...	.08
Wormwood, Herb, Imp., bales ...lb.	.08	.08½
Yellow Dock Root, bags....lb.	.07	.08
Yerba Mate, bags...lb.	.22	.25
Santa, bags...lb.	.09	.10½

Therapeutic Novelties

(*Continued from page 51*)

Deitsche Medinizische Wochenschrift, year 1930, number 40 and Pal, Deutsche Medinizische Wochenschrift, year 1930, number 40.

Two urinary antiseptics of more than ordinary interest and importance have been brought out on the market recently. Both of these are dyestuffs, which are precipitated by the kidneys. They possess high therapeutic activity due to the fact that they have a strong affinity for the tissues, a high degree of penetrability and powerful bacteriological properties. At the same time they are relatively non-poisonous.

The first of these is known as pyridium. This product is a condensation product of beta and gamma-phenylazo-alpha-alpha-diamino-pyridin-hydrochloride. It is a brick red powder and is soluble with difficulty in cold water. It is much more readily soluble in hot water, in alcohols, glycerin and fats. It is eliminated in the urine in the unchanged state, after it has become concentrated in the mucous membranes of the urino-genital tract. It is relatively non-poisonous to the higher animals. It has the effect of preventing the development of bacteria even in a concentration of one in 500,000. It is used in the treatment of inflammatory conditions of the bladder,

(*Continued on page 103*)

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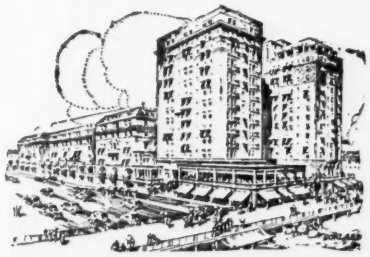

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Physiological Assays

(*Continued from page 26*)

regarding assay methods or tests. Others would leave details to the individual worker. Suggested changes, it was believed in trade circles, would probably be referred to colleges and research institutions to determine whether new tests, methods, standards, or what not would be better than old ones. It seems not unlikely to trade people that long study and observation may be necessary to determine such questions.

Meanwhile, let us interview Walter G. Campbell. Said the Director of Regulatory Work to Drug Markets:

"If, in the course of our work on any drug, we find what appears to be a fault in the U. S. P. standard, we give the results, with all information we have bearing upon the matter, to the Revision Committee. Beyond that we have nothing whatever to do with the situation.

"We have said from the beginning, and now repeat, that we are vitally interested in the standards of the Pharmacopoeia, because they are legal standards. We operate under them in enforcing the law. But the task of modifying or revising those standards is not our task. We have no wish to undertake that revision, but we are anxious that the body upon which responsibility rests, the Revision Committee, be informed as fully as possible of any important fact that develops in our operation, so that they can work with the utmost intelligence.

"We have undertaken to give information, from time to time, and will continue to do so as long as the Revision Committee desires to receive such information. The Department thinks there should be changes in the Pharmacopoeia and has so communicated to the Committee. The latter has not yet acted.

"If the Food and Drug Administration acquires information justifying the revision of U. S. P. standards along lines suggested, the appropriate thing would be to submit that information to the Revision Committee and give the latter opportunity to appraise those suggestions for just what they may be worth. It may be the Committee has valuable and more extensive information than the Department has. Presumeably, the purpose of the Committee is to get proper scientific standards, and the Department has the same object. The object of both is identical."

Mr. Campbell concluded by saying that it would not be an opportune time to enter into public discussion of the changes suggested by the Department, with a view to creating popular opinion to support the Department's position. Such action might interfere with the careful and deliberate consideration which he believed the subject will receive.

Asked about what the Department was doing in connection with the Revision Committee at recent conferences and otherwise, Dr. Frederick J. Cullen, Senior Medical Officer of Drug Control, who was in charge during the absence of Dr. Durrett, replied that "the only thing the Department is doing is to sit in, as friends, to help the Revision Committee where there is a discrepancy in methods. They may have entirely different ideas," he added. "Our information is added to what they receive from other sources. We believe that some things, especially chemical analyses, need changing in the Pharmacopoeia."

Acids in Cosmetics

(*Continued from page 43*)

It must not be thought that it is always necessary or advisable to use acidic preparations. A neutral skin cream or tooth paste always possesses its own advantages. The mistake must not be made of considering the acidic character of a stearate cream as a special advantage, for this is apparently caused by acid fatty salts of the alkalies, which injure the skin.

An example of a good grade of acidic hair wash may be given. It contains one per cent. of lactic acid and sodium lactate mixture, 98 per cent. of 45 per cent. concentrated alcohol and half a per cent. of cholesterin dissolved in oil as well as the same proportion of perfume oil. About one to two grams of sapamin lactate may be added to make the preparation foam. This is claimed to be the first acid hair wash that may be safely prepared and used.

Therapeutic Novelties

(*Continued from page 101*)

etc. It is also used as a mouth wash. The literature on this subject consists of the following: Stern, Klinische Wochenschrift, 1929, page 1358, Bernhardt, Derm. Zeitschrift, year 1929, volume 55, Russo, Zahnaertzl Rundschau, year 1930, volume 52 and others.

The second of these urinary antiseptics is neotropin. This preparation is manufactured by Schering Kahlbaum A. G., Berlin, Germany. Its chemical name is 2-butyl-hydroxy-2^1:6^1-diamino-5:5^1-azopyridin. This preparation is a yellow powder which is slightly soluble in water and has a melting point of 129 degrees C. The pharmacological properties of neotropin are very much like those of pyridium. In contradistinction to the urine disinfectants which have been used as a general rule up to the present time, the therapeutic effect of neotropin depends on the degree of acidity of the urine. The new preparation, neotropin, is used in the same manner as indicated above. The literature on this preparation includes the following: Warner, Med. Welt. year 1930, number 39.

The antipyretics, which have been used for the most part up to the present time, have a decided sweat-producing action, which is found to be exhausting by many patients. The preparation, which has been introduced into the market under the name of Amatin and which is manufactured by the I. G. Farbenindustrie A. G., Frankfurt-am-Main, Germany, does not have this action on the patient.

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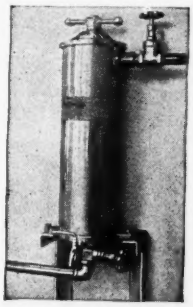

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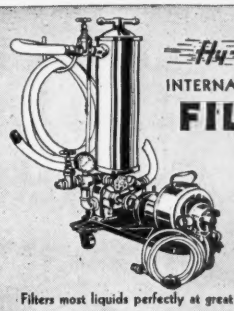

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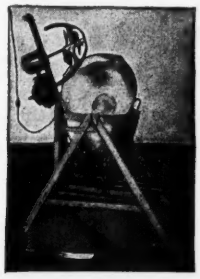

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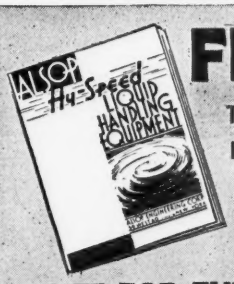

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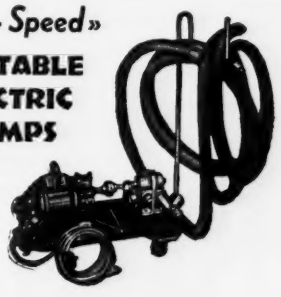

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